DAILY HASSLES, RELIGIOUS COPING, DEPRESSIVE SYMPTOMATOLOGY, AND ALCOHOL USE IN STUDENTS AT A RELIGIOUSLY-AFFILIATED COLLEGE

by

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For Amy, Katelynn, and Dylan-

Your unwavering love has sustained me during this journey.
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Daily Hassles, Religious Coping, Depressive Symptomatology, and Alcohol Use in
Students at a Religiously-Affiliated College

Abstract

by

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This study examined the effects of daily hassles and positive and negative
religious coping on alcohol use and depressive symptomatology among 423 students at a
religiously-affiliated college. This study also tested a conceptual model in which positive
religious coping moderated the relationship between daily hassles and alcohol use and the
relationship between daily hassles and depressive symptomatology. The moderation
hypotheses were tested via hierarchical multiple regression analyses. Although a
statistically significant, negative relationship was found between positive religious coping
and the study’s alcohol use variables (\( r = -.23 \) to -.26, \( p < .01 \)), positive religious coping
was not found to moderate the relationship between daily hassles and alcohol use in the
students in this study, nor was it found to moderate the relationship between daily hassles
and depressive symptomatology. The study did find high rates of depressive
symptomatology in the students surveyed (55.5% were above the CESD-10 cut point for
the presence of depressive symptomatology) and a strong, statistically significant,
positive correlation (\( r = .62, p < .01 \)) between daily hassles and depressive
symptomatology. The findings of the study suggest that current conceptualizations of
positive and negative religious coping may need to be re-examined, as no statistically
significant relationship was found between these variables, nor did the variables relate to
the study’s dependent variables as expected. Implications for policy, practice, theory,
and research are discussed.
Chapter 1: Introduction, Statement of the Problem and Link to Social Welfare

Despite decades of research, public awareness, and prevention programs, alcohol use on college campuses remains a pressing social problem with serious individual, institutional, and societal consequences. Recent research has found that religiosity and spirituality are often related to lower rates of alcohol use among college students. This study will examine the link between college student alcohol use and religious coping, an aspect of religiosity/spirituality which has been found to be related to a number of salutary mental and physical health effects.

The Scope of College Student Drinking

A recent national survey found that 84.7% of college students have tried alcohol in their lifetime, while 65.4 have used alcohol in the past 30 days (Johnston, O’Malley, Bachman, & Schulenberg, 2007). 40% of college students surveyed reported engaging in heavy drinking (defined as having five or more drinks on a single occasion) in the two weeks prior to the survey (Johnston et al.). Of special concern is the fact that college students abuse alcohol at greater rates than their same-age peers who are not enrolled in college (Johnston et al.; Substance Abuse and Mental Health Services Administration, SAMHSA, 2006).

The Consequences of College Student Drinking

College student drinking is related to a host of other problems. These problems affect micro, mezzo, and macro-systems, with reverberations across society as a whole. The following paragraphs will provide a brief overview of some of the most serious consequences associated with college student drinking.
Death

Research suggests that 1700 college students per year die as a direct result of alcohol use and that the figure may be increasing annually (Hingson, Heeren, Winter, & Wechsler, 2005). The vast majority of these deaths are the result of automobile accidents which have been determined to be alcohol related (Hingson et al.). Recent research determined that 31.4% of college students had driven while under the influence of alcohol (Hingson et al.), while 38% of all college students had ridden with a driver who was under the influence of alcohol (Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002).

Medical Problems and Injuries

College student alcohol use often results in serious medical problems. A recent study suggests that 599,000 students annually sustain alcohol related injuries (Hingson, Heeren, Winter, & Wechsler, 2005). Vik, Carrello, Tate and Field (2000) found that nearly 1/3 (32.7%) of all students who reported heavy drinking (or “binge drinking”) had sustained an alcohol-related injury during the previous year. Wright, Norton, Dake, Pinkston, and Slovis (1998) found lacerations, sprains, and fractures to be the most common alcohol-related injuries among college students. Other common alcohol-related medical problems include severe intoxication/overdose, nausea and vomiting, and abdominal pain (Turner & Shu, 2004; Wright et al.). Estimates of the number of alcohol-related medical problems are likely to be conservative, as some students may not seek treatment for alcohol-related injuries or may wait to seek treatment until they are no longer under the influence of alcohol (Turner & Shu; Wright et al.).
Violence

College student alcohol use has been found to be related to campus violence. Hingson, Heeren, Zakocs, Kopstein, and Wechsler, (2002) estimate that over 600,000 students are assaulted or struck each year in cases of alcohol related violence. Hingson et al. also suggest that over 60,000 college students are victims of alcohol-related sexual assault on a yearly basis.

Destruction of Property

Alcohol-related destruction of property is a problem on many college campuses (Epstein and Finn, 1997). Engs and Hanson (1994) found that 10.5% of students who engaged in vandalism on college campuses had been drinking when they did so. The culture of alcohol use on some campuses may encourage vandalism; for example, on some college campuses it is common for students to drink heavily and destroy property on certain holidays or after athletic events (Madensen & Eck, 2006).

Academic Problems

College student alcohol use is related to low academic achievement. Engs, Diebold, and Hanson (2001) found a significant relationship between alcohol use and lower grade point average (GPA); the researchers also found that students with a 4.0 GPA drank 1/3 as much as students with a GPA of lower than 2.0. Wechsler, Molnar, Davenport, and Baer (1999) found that 53% of students who were heavy drinkers reported falling behind in class and missing classes. Vick, Carrello, Tate, and Field (2000) found that 68% of heavy drinkers reported missing class for alcohol-related reasons.
**Sexual Choices**

College student alcohol use is related to involvement in risky sexual behaviors. Vick, Carrello, Tate, and Field (2000) found that 24.3% of heavy drinking students surveyed had engaged in unprotected sex and that 42.1% had unplanned sex as a result of alcohol use. Wechsler, Lee, Kuo, Seibring, Nelson, & Lee (2002) found that 21.3% of students who drank engaged in unplanned sex, while 10.4% of all drinking students engaged in unprotected sex.

**Developmental Consequences**

In addition to the immediate consequences of alcohol use, students may also experience long-term developmental problems as a result of heavy drinking. Brain maturation and development continues until the early twenties, placing traditional-age students who drink heavily in danger of arrested brain development (Winters, 2004). Brown, Tapert, Granholm, and Delis (2000), found that adolescents with a history of heavy drinking developed memory problems. In a neuroimaging study, Debellis et al. (2000) found decreased hippocampal volume among adolescents who were heavy alcohol users. (The hippocampus is a brain region which is linked to memory and learning, Spear, 2000.) Medina, Schweinsburg, Cohen-Zion, Nagel, and Taper (2007) also found that adolescent alcohol users exhibited hippocampal asymmetry, with decreased left hippocampal volume. Medina et al. linked these findings to decreased rates of verbal learning ability in adolescent alcohol users.

**Prevention Efforts**

Over time, a number of approaches have been developed to prevent or reduce alcohol use among college students. Research suggests that a “social norms” approach to
alcohol use may be effective in lowering rates of student alcohol use on college campuses (DeJong et al., 2006). Such an approach involves publishing information on actual rates of college student alcohol use on campus (Perkins, 2003). Such informational campaigns are designed to change student beliefs regarding the amount of alcohol use which is typical among their peers (Perkins). Student internalization of moderate alcohol use norms is believed to lead to more moderate rates of alcohol use (Perkins).

Recently, a group of over 100 college presidents began to publicly advocate for the legal age for alcohol use to be lowered from 21 to 18, in hopes that such a move would encourage moderate alcohol use and lower rates of dangerous binge drinking (Roan, 2008). A number of public health and substance abuse experts have opposed such a move, leading to increased public debate regarding the causes of alcohol use among college students and the effectiveness of prevention efforts (Roan).

Alcohol Use vs. Alcohol Abuse

Despite the consequences of college student drinking described above, it is important to note that not all alcohol use carries such consequences. The point at which alcohol use becomes problematic is difficult to measure and is subject to individual variation. In light of this, this study will focus on measuring the quantity and frequency of alcohol use by study participants, without attempting to classify participants’ alcohol use via diagnostic categories such as “alcohol abuse” or “alcohol dependence.”

Role of Spirituality/Religion

Research has consistently found that religiosity and spirituality are related to decreased use of alcohol (and other drugs) by college students (Bahr, Maughan, Marcos, Li, 1998; Bell, Wechsler, & Johnston, 1997; The National Center on Addiction and
Substance Abuse at Columbia University, CASA, 2001a; CASA 2001b; Engs, Diebold, & Hanson, 1996; Forthun, Bell, Peek, & Sun, 1999; McBride, Mutch, & Chitwood, 1996; Patock-Peckham, Hutchinson, Cheong, & Nagoshi, 1998; Perkins, 1985; Stewart, 2001; Strawser, Storch, Geffken, Killiany, & Baumeister, 2004). These findings suggest that religiosity and spirituality are related to alcohol and other drug use and may be useful in efforts designed to address the high levels of alcohol use on college campuses.

One way that religiosity/spirituality may mitigate college student alcohol use is by providing alternative methods of coping (i.e., “religious coping”) with the stress that is inherent in college life. Research on stress in college students has found that many students report feeling overwhelmed by the academic and social demands of college life (CASA, 2007; Larson, 2006; Sax, 1997). Religious coping theory posits that religion offers individuals a variety of resources which may aid in coping with and overcoming stressful or difficult situations (Pargament, Ano, & Wachholtz, 2005).

Pargament, Smith, Koenig, and Perez (1998) identified two patterns of religious coping. Positive religious coping is characterized by “a sense of spirituality, a secure relationship with God, a belief that there is meaning to be found in life, and a sense of spiritual connectedness with others” (Pargament et al., p. 712). Negative religious coping is characterized by a less secure relationship with God, a tenuous and ominous view of the world and “religious struggle” (Pargament et al, p. 712).

Only a few studies have examined the relationship between religious coping and alcohol use in youth and young adult populations. Daugherty and McLarty (2003) found that religious coping was related to decreased consumption of alcohol in a sample of 178 college students. Brechting and Giancola (2006) found religious coping to be related to
decreased rates of substance use in a longitudinal study of 326 adolescent boys. Willis, Wallston, and Johnson, in a study of 551 undergraduate students, found that religious coping was negatively related to alcohol use in the 30 days prior to the survey, as well as binge drinking in the 30 days prior to the survey (2001).

This study sought to extend the knowledge base related to the relationship between religious coping and college student alcohol use by examining the differential effects of positive and negative religious coping on alcohol use in college students. The study also tested a conceptual model in which positive religious coping moderated the relationship between stress and alcohol use in college students.

This study examined measures of stress, alcohol use, religious coping, and drinking motivation at a religiously-affiliated college in the Midwestern United States. A religiously-affiliated college was chosen because students at religious schools are likely to engage in religious coping practices. In addition, religiously affiliated institutions of higher education have experienced a great deal of recent growth. Between 1990 and 2002, enrollment at religious colleges increased 60% (Riley, 2005). This growth is even more remarkable given that enrollment at public and private, non-sectarian schools remained flat during this same period (Riley). The relative lack of social science research which has explored the alcohol use of students at such schools offers another compelling reason for studying alcohol use and religious coping at a religiously-affiliated college.

Relevance of Topic to Social Welfare

Research on the relationship between alcohol use and religious coping holds a great deal of relevance for the field of social welfare. The topic has important
implications for social work/social welfare research, education, and practice. These areas will be discussed further in the following paragraphs.

Research

The topic of this study is relevant to social welfare research because of the scope and severity of the consequences of college student drinking. As discussed above, a large number of college students engage in high rates of alcohol use and research has linked college student drinking to a number of severe consequences, such as premature death, injury, violence, destruction of property, academic problems, risky sexual behavior, and developmental problems. In light of the far-ranging consequences associated with college student drinking, it is important that further research be conducted on the risk and protective factors associated with this problem.

The topic of this study is also relevant to social welfare research because of recent increased attention in social work (Canda, 1997; Canda & Furman, 1999) and related fields (Paloutzian & Park, 2005) to understanding the effects of religion and spirituality on human functioning and social problems. This study extends the knowledge base regarding the effects of spirituality and religion on college students’ alcohol use.

Teaching

The topic of this study is also relevant to social work education. The Educational Policy and Accreditation Standards (EPAS), published by the Council on Social Work Education (CSWE) mandate that accredited social work programs maintain an atmosphere which is respectful of religious diversity. For example, CSWE Educational Policy 3.1 requires accredited social work programs to demonstrate “commitment to diversity- including…religion…” (2008). Educational Policy 2.1.4 requires accredited
programs to teach students to “understand how diversity characterizes and shapes the human experience and is critical to the formation of identity (CSWE). Educational Policy 2.1.4 goes on to list religion as a dimension of diversity (CSWE).

This study on the relationship between religious coping and college student substance use, and similar studies which examine the potential positive effects of religion in regard to social problems, supports the CSWE requirements for respect regarding religious issues. The availability of research which explores the protective and/or therapeutic aspects of religion and spirituality provides social work educators with educational content which supports the EPAS requirements.

Practice

Research suggests that a majority of social workers have incorporated “spiritually oriented helping activities” in their professional work with clients (Canda & Furman, 1999, p. 261). Given the current emphasis on evidence-based practice and the use of empirically-validated interventions, further research on the benefits of religious and spiritual interventions will provide social workers with empirical evidence related to spiritually-oriented interventions. For example, this study of religious coping and college student substance use may be utilized on a micro-level by individuals who practice with college student populations, as well as on a macro-level by individuals who are responsible for implementing substance abuse prevention programs on college campuses.
Chapter 2: Literature Review and Conceptual Model

The previous chapter provided an overview of the scope and consequences of college students’ alcohol use. This chapter will define and discuss the constructs of interest in the current study and will review the relevant literature related to the effects of religion/spirituality and stress/coping on college students’ use of alcohol.

Alcohol Use in College Students

As discussed in the first chapter, alcohol use is a pervasive problem on the campuses of American colleges and universities. Johnston, O’Malley, Bachman, and Schulenberg (2007) found that 48% of college students admitted to having been drunk during the month prior to their study. 82% of all college students admitted to consuming alcohol in the past year and 40% admitted to binge drinking (Johnston et al.). These statistics have been relatively stable over time, with little substantial change since 1980 (Johnston et al.).

College students appear to abuse alcohol at higher rates than their same-age peers who do not attend college. Johnston et al. (2007) report that 35% of young adults who have been out of high school for one to four years reported heavy drinking episodes (defined as five or more drinks on a single occasion) during the two weeks prior to being surveyed. In comparison, 40% of college students of the same age reported binge drinking episodes (Johnston et al). Similarly, SAMHSA’s National Survey on Drug Use and Health (NSDUH) found that 64.4 % of young adults between the ages of 18 and 22 who were enrolled in college on a full-time basis reported having used alcohol in the thirty days prior to being surveyed, whereas 53.2% of their same-age peers who were not enrolled in college on a full-time basis reported consuming alcohol.
Developmental theory may help to explain the high levels of alcohol use among college students between the ages of 18 and 25. Erikson (1968) suggested that human development occurs along a continuum of developmental stages, with each stage constituting a “crisis” which must be resolved prior to moving to the next stage. Erikson postulated that the adolescent developmental crisis was related to identity development. During adolescence, individuals either make progress in establishing a healthy identity or experience identity confusion (Erikson). Erikson claimed that adolescence was a time of experimentation, wherein individuals tried new behaviors and roles “on for size.”

Erikson suggested that societal changes in industrialized countries (such as the need for increased education prior to beginning a career) had led to adolescence extending for a longer period of time than it previously had.

Current research validates Erikson’s hypothesis, suggesting that individuals are now involved in the developmental tasks of adolescence well into their mid-to-late-twenties. This extension of adolescence has led to a shift in the timing of key events and transitions within the life course of many adolescents and young adults; for example, individuals now tend to marry at a later age than was common in previous generations (Arnett, 2006). In light of these changes, many researchers now suggest the insertion of a new developmental stage, “emerging adulthood,” between Erikson’s adolescent and young adult stages (Arnett). This stage of emerging adulthood encompasses the traditional college years and is marked by identity exploration, instability, self-focus, a transient feeling of being “in between,” and a sense of future possibility (Arnett).

Research suggests a number of developmental reasons for the high rates of alcohol use among college students. The emerging adulthood stage is often viewed as an
ideal time to drink, perhaps due to individuals’ lack of “adult” responsibilities during this stage (Schulenberg & Maggs, 2002). Peers also play a role, as cultures of alcohol use may develop due to developmental transitions which occur when individuals move away from daily parental supervision and into more permissive college environments (Schulenberg & Maggs). Stress most likely plays a role, as well. The multiple transitions faced in young adulthood, and the accompanying instability of these transitions, may lead to the use of alcohol to cope with feelings of stress (Schulenberg & Maggs). The experimentation and exploration which are normative developmental features of the emerging adulthood stage (Arnett, 2006), may lead to experimentation with alcohol. Finally, the ambiguous, “in-between” status of emerging adults (Arnett, 2006) may be exacerbated by U. S. alcohol policy, which has established 21 as the legal drinking age, while allowing individuals to perform other adult functions (such as voting and registering for military service) at 18 years of age.

Studies have attempted to isolate risk and protective factors related to college student alcohol use and some researchers have explored the relationship between religious and spiritual beliefs to college student alcohol use. Research in this field suggests that religion and spirituality are often related to decreased rates of alcohol use in college students (Bahr, Maughan, Marcos, Li, 1998; Bell, Wechsler, & Johnston, 1997; The National Center on Addiction and Substance Abuse at Columbia University, CASA, 2001a; CASA 2001b; Engs, Diebold, & Hanson, 1996; Forthun, Bell, Peek, & Sun, 1999; McBride, Mutch, & Chitwood, 1996; Patock-Peckham, Hutchinson, Cheong, & Nagoshi, 1998; Perkins, 1985: Stewart, 2001; Strawser, Storch, Geffken, Killiany, & Baumeister, 2004).
Religion and Spirituality

Although religion and spirituality are generally understood to be closely related concepts, the terms have different meanings. Spirituality is generally understood in terms of an internal perception of a relationship with a higher power. For example, CASA’s landmark report *So Help Me God: Substance Abuse, Religion, and Spirituality* defined spirituality as a “personal and individualized response to God, a higher power, or an animating force in the world” (2001b, p. 5). On the other hand, religion is usually discussed in terms of external practices and corporate rituals aimed at connecting with or understanding a higher power. For example, the CASA report defined religion as “a set of particular beliefs about God or a higher power shared by a group of individuals, and the practices, rituals and forms of governance that define how those beliefs are expressed” (CASA, 2001b, p. 5).

Researchers have understood the relationship between religion and spirituality in a variety of ways (see Figure 1). Zinnbauer and colleagues (1997) concluded that religiosity and spirituality are interlocking concepts which share some common ground but also have separate, mutually exclusive features. Such a conceptualization indicates that an individual could be both spiritual and religious; spiritual, but not religious; or religious, but not spiritual. Hill and Pargament (2003) and Sahlein (2002) discussed religion as a broad construct which includes spirituality. This conceptualization of religion indicates that an individual could be religious but not spiritual, or could be religious and spiritual. Conversely, Berry (2005) and Hodge (2006) conceptualize spirituality as an overarching construct which includes religion. Such a conceptualization
indicates that an individual could be spiritual but not religious, or could be spiritual and religious.

*Figure 1. Various Conceptualizations of the Relationship between Spirituality and Religion*


Religiosity, Spirituality, and Alcohol Use

In America, religious and spiritual beliefs have historically been linked to low rates of alcohol consumption. As early as the 1780’s, the Quaker and Methodist denominations began to link moderation of drinking with religious faith (Lender & Martin, 1982). In 1811 and 1812, a large number of Presbyterian clergy began to preach against the use of alcohol (Lender & Martin, 1982). Although most of the early religious temperance advocates called for moderation in the use of alcohol, this message changed over time to a campaign for complete abstinence (Lender & Martin). By the late 1800’s the “Woman’s Crusade” led to prayer vigils outside of establishments which sold alcoholic beverages, with the stated purpose of forcing the businesses to close (Lender & Martin). This “crusade” led to the formation of the Women’s Christian Temperance
Union, a religious temperance organization with a great deal of political power (Lender & Martin). The temperance movement was eventually able to secure the passage of the Eighteenth Amendment, popularly known as “Prohibition,” which made the manufacture and sale of alcohol illegal (Lender and Martin). The Eighteenth Amendment was enacted in 1920 and repealed in 1933.

Another movement which advocated a spiritual cure for alcohol problems emerged soon after the repeal of Prohibition. Alcoholics Anonymous (AA) was established in 1935 (Cheevers, 2004; Kurtz, 1979). Bill Wilson, one of the co-founders of AA, reported having a dramatic spiritual awakening, after which he never drank again (Cheevers, 2004; Kurtz, 1979). Wilson was heavily influenced by the Oxford Group, a Christian discipleship program which emphasized the importance of a personal relationship with God (Cheevers, 2004; Kurtz, 1979). Wilson was also indirectly influenced by Carl Jung, who reportedly told an alcoholic whom he had unsuccessfully treated that a religious conversion was sometimes the only hope for recovery (Cheevers; Kurtz). Wilson distilled his spiritual experiences into twelve steps, which AA and other groups which address similar addictive behaviors continue to use (Cheevers; Kurtz).

Although the merits and effectiveness of such “Twelve Step programs” have been debated in both religious and secular circles (Marlatt, 1998; Peele, 1995; Shaler, 2005; Stoltzfus, 2006), a number of studies have found twelve step programs to be at least as effective as professional treatment in addressing alcohol problems (Bogenschutz, 2005; Brennan, 1998; Brooks & Penn, 2003; Brown, Seraganian, Tremblay, & Annis, 2002; Fiorentine, 1999; Gilman, Galanter, & Dermatis, 2001; Hayes et al., 2004; Laudet et al., 2004; McKay, Merkle, Mulvaney, Weiss, & Koppenhaver, 2001; Ouimette, Finney, &
Moos, 1997). The Project Match study, which sought to match various types of alcoholics to specific therapeutic modalities, found that patients with low levels of psychopathology who were treated via twelve step facilitation therapy (wherein professional treatment providers assist consumers to understand and connect with twelve step programs) reported more days of abstinence than similar patients treated via cognitive behavioral therapy (NIAAA, 1996). Project Match also found that rates of complete abstinence were higher among individuals who were involved in twelve step facilitation therapy than among those who were involved in cognitive behavioral therapy or motivational enhancement therapy (NIAAA).

Organized Religion and Alcohol Use

Modern religious groups hold widely varying views related to the use of alcohol. Some groups utilize alcohol in their religious rituals; for example, the Roman Catholic and Eastern Orthodox faiths use wine in the sacrament of communion, while Jews use alcohol during seders and use a wine glass during wedding ceremonies. Other religious groups, such as Mormons and Seventh-Day Adventists, forbid the use of alcohol altogether. Park, Ashton, Causey, and Moon (1998) classified religious beliefs regarding alcohol use as “proscriptive,” “moderate,” or “nonproscriptive.” In this conceptualization, nonproscriptive groups had few restrictions on alcohol use and generally viewed it in a positive light (Park et al.). For example, in such groups alcohol may be understood as a gift of God or as evidence of the goodness of the created world. Moderate groups were less affirming of alcohol use, but did not discourage its use (Park et al.). Proscriptive groups were those which tended to discourage alcohol use and often enacted sanctions (which could be formal or informal) in order to discourage alcohol use (Park et al.).
Research has found that the position religious groups take in regard to alcohol use is significantly related to levels of alcohol use by individual members of the group, with individuals who are affiliated with proscriptive religious traditions tending to use alcohol at lower rates than those who are affiliated with more tolerant faith traditions. Jensen and Erikson (1979), in a study of 3268 high school students, found that Mormon students were less likely to be involved in drinking or drunkenness than Protestant or Catholic students. Jensen and Erikson attribute this difference to the Mormon faith’s stronger denominational proscriptions against alcohol use. Similarly, Bock, Cochran, and Beeghly (1987) found that the protective effects of religiosity as related to alcohol use are strongest in individuals who are affiliated with denominations which are strongly proscriptive against alcohol use. Cochran, Beeghley, and Bock (1988) found similar results in a secondary analysis of General Social Surveys (GSS) data. Clark, Beeghley, and Cochran’s 1990 analysis of GSS data replicated the finding that the proscriptiveness of a given denomination or religion is related to levels of substance use in individual members. Cochran’s (1993) study of 3065 adolescents found that the negative relationship between religiosity and substance use was stronger in individuals who belonged to proscriptive denominations. Engs, Diebold, and Hanson (1996) found a positive relationship between denominational proscriptiveness and rates of abstinence in a study of 12,081 college students. In a study of 7692 high school seniors, Park, Ashton, Causey, and Moon (1998) found that denominational proscriptiveness was related to reduced rates of alcohol use. However, no significant relationship between denominational proscriptiveness and binge drinking was found in the Park et al. study.
Individuals who use alcohol despite the proscriptions of their religious group may have a greater than average likelihood of alcohol abuse. Bahr and Hawkes (1995) term such users “paradoxical users.” Skolnick (1958) suggested that individuals who drink alcohol despite the proscriptions of their religious reference groups tend to experience “social complications” to a greater degree than individuals who are members of non-proscriptive faiths. Cahalan, Cisin, and Crossley (1969) report that Knupfer, Fink, Clark, and Goffman (1963) found that individuals who drank heavily despite religious or other proscriptions against doing so tended to engage in escape drinking, that is, they drank to avoid dealing with problems. Calahan et al. report findings similar to Knupfer et al.; however, Calahan et al. cautioned that the small size of the subsamples with which they performed their analyses limited the generalizability of their findings. It is possible that such users develop problems because of the isolation and guilt which result from breaking reference group norms.

Some research does not support the idea of paradoxical use. Bahr and Hawks note that studies by Hawks and Bahr (1992) and Krohn, Akers, Radosovech, and Lanza-Kaduce (1982) found no evidence of paradoxical use.

The Protectiveness of Religion/Spirituality

In recent years, social science researchers have frequently documented the protective effects of spirituality and religiosity in regard to rates of substance use (Bahr, Maughan, Marcos, Li, 1998; Bell, Wechsler, & Johnston, 1997; CASA, 2001a; CASA 2001b; Engs, Diebold, & Hanson, 1996; Forthun, Bell, Peek, & Sun, 1999; Hodge, Cardenas, & Montoya, 2001; McBride, Mutch, & Chitwood, 1996; Patock-Peckham, Hutchinson, Cheong, & Nagoshi, 1998; Perkins, 1985: Stewart, 2001; Strawser, Storch,
Geffken, Killiany, & Baumeister, 2004). However, researchers have not reached a consensus regarding a theoretical explanation of the protective effects of religiosity and spirituality. The following paragraphs will critically review the theoretical literature related to the protectiveness of religiosity and spirituality in regard to the use of alcohol and other drugs.

**Review of Theoretical Literature**

Most of the extant literature on the effects of religion/spirituality on alcohol and other drug use has utilized peer influence (or similar theories which attribute the protective effects of religiosity and spirituality to the influence of a religious or spiritual reference group) as a theory base. However, in many of these studies the use of peer influence and related theory is implicit or introduced after the conclusion of the study to explain findings. For example, Patock-Peckham, Hutchinson, Cheong, and Nagoshi (1998) studied 263 college students who were self-reported alcohol users and found that students with no religious affiliation had higher levels of alcohol use. The researchers suggested that peer influence explained this finding, concluding “that alcohol use levels are mostly driven by social factors” (Patock-Peckham et al., 1998, p. 87).

A number of studies went further and found some evidence of a theoretical link between religiosity/spirituality and peer influence. McBride, Mutch, and Chitwood explored the influence of religious peer groups in a survey of 1865 students at Seventh-day Adventist colleges (1996). Although health (87%) and personal control of one’s life (84%) were the factors listed most frequently by respondents in order to explain their choice to abstain from substance use, 32% listed the influence of friends as a reason for abstinence (McBride, Mutch, & Chitwood, 1996). Bahr, Maughan, Marcos, and Li
(1998) studied a random sample of 13,250 adolescents and found that religious adolescents tended to abstain from substance use and associated with peer groups which did not use drugs. CASA, in a study of a national sample of 1000 adolescents found that “the proportion of a teen’s friends who attend religious services appears more relevant to the teen’s [substance abuse] risk score than even the teen’s own degree of religious attendance’ (2001a, p. 15).

It is important to note that a review of the literature on peer influence theory found some discussion regarding the differential effects of peer selection as opposed to peer influence (Burkett and Warren, 1987; deVries, Candel, Engels, & Mercken, 2006). Some researchers suggest that, rather than being influenced by peers, individuals choose a peer group which replicates their own values. Although this model does not appear to have been tested a great deal with religious/spiritual peer groups, Burkett and Warren (1987), in a study of marijuana use in a sample of college students, found that that this peer selection model accounted for most of the protective effects of religiosity.

The bulk of the recent research on peer selection and peer influence suggests that there is a reciprocal relationship between the two (Aseltine, 1995; Kandel, 1978; Matsueda & Anderson, 1998; Reed & Rose, 1998; Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1994; Weerman & Smeenk, 2005). For example, Aseltine, in a study of 435 adolescents, found evidence that “both selection and socialization influences play a role” in adolescent substance use (1995, p. 103).

In summary, peer influence theory has been frequently used to explain the protective effects of religiosity/spirituality in regard to substance use in college students and has some empirical support, but a review of the literature revealed some problems
with its current usage. Most studies have failed to account for the effects of peer selection and the possibility of a reciprocal relationship between peer influence and peer selection. Also, some researchers have utilized peer influence theory retroactively to explain findings which indicated that religiosity/spirituality is protective against substance use in college students, but have not explicitly tested the underlying causal mechanisms of the theory.

Another problematic aspect of the current usage of peer influence theory is that it does not adequately explain the protectiveness of religiosity and spirituality in regard to the research literature related to motives for alcohol use. The following section will review the literature on motives for substance use. Following this review of the literature, the possible relationships between peer influence theory and motives for substance use will be discussed.

Motives for Alcohol Use

A number of studies have explored motives for alcohol use. Farber, Khavari, and Douglass (1980) studied 2496 individuals (of which 1711 were undergraduate college students) and found socialization and escape to be the two primary reasons for alcohol use. Escape drinking was characterized by the use of alcohol to cope with stress or to relax (Farber et al.). Farber et al. found that escape drinking was more likely to be related to problem drinking, as 93% of a subsample of alcoholics reported involvement in escape drinking. Cooper, Russell, Skinner, and Windle (1992) validated a three-factor model of drinking motivation. The model developed by Cooper et al. (1992) was similar to Farber et al.’s model, but also included enhancement of positive emotions (i.e., celebration) as a third motive for drinking. Stewart, Zeitlin, and Samoluk (1996) tested Cooper et al.’s
(1992) three-factor model of drinking motivation with a sample of 314 students and found empirical support for the three-factor model. Cooper (1994) also developed and validated a four-factor model of motivation for adolescent alcohol use. Cooper’s four-factor model included conformity to peer drinking expectations as a motive for drinking, along with the previously established coping, socializing, and enhancement motives. Cooper, Frone, Russell, and Mudar (1995) also developed a two-factor model of drinking motivation which focused on the regulation of positive and negative affective states, with the regulation of negative affective states corresponding to coping motives for drinking. Abbey, Smith, and Scott (1993) studied 781 drinkers and found that socializing, coping, and gender significantly predicted levels of alcohol use.

Relationship of Peer Influence to Motives for Alcohol Use

Peer influence theory may explain the protectiveness of religiosity and spirituality in regard to three of the commonly accepted motives for alcohol use: conformity, socialization, and enhancement of positive affective states (celebration). It seems likely that spiritual and religious peer groups develop alternative socialization and celebration rituals which do not involve substance use. In this way, such rituals replicate the abstinence or moderation values of the participants’ faith traditions.

Although peer influence theory explains the protective effects of religion and spirituality in regard to social motivations for alcohol use, little of the extant literature addresses the relationship between spirituality/religiosity and the coping motivation for alcohol use. The following paragraphs will provide an overview of the relevant literature related to stress, appraisal, and coping. Following this overview of the literature on stress, appraisal, and coping, the relationship between coping and the protective effects of
spirituality and religiosity in regard to alcohol use will be discussed. Religious coping
will be discussed as a possible theoretical explanation for the protectiveness of religiosity
and spirituality against coping-motivated alcohol use.

Stress

Stress has been conceptualized in a variety of ways in the research literature;
some researchers have conceptualized stress as a reaction, others as a stimulus, and still
others as a transaction (Lyon, 2000). Reaction-oriented conceptualizations have
emphasized individual responses to noxious experiences, while stimulus-oriented
conceptualizations have emphasized the role of noxious experiences or events (stressors)
as transmitters of stress (Lyon). However, Lazarus and Folkman, in their seminal work
Stress, Appraisal, and Coping (1984), draw on previous work by Lazarus (1966) to
articulate a cognitive mediational view of stress which emphasizes the importance of
understanding stress as a transaction between the person and the environment. Lazarus
and Folkman suggest that when individuals experience stressful situations they appraise
the situation. Lazarus and Folkman distinguish between two types of appraisal; primary
and secondary. Primary appraisal assesses the level of threat represented by a stressor.
Secondary appraisal assesses the availability of means to address the stressor.
Lazarus and Folkman discuss three possible primary appraisals: threat, benign-positive,
and challenge. The nature of the appraisal then informs the individual response to the
stressor. Thus, Lazarus and Folkman see appraisal as a mediating link between the
individual and the environment. This cognitive understanding of stress has come to be
the predominant model in the psychological literature (Folkman & Moskowitz, 2004).
Types of Stressors

The research literature generally identifies two types of stressors: major life events (or changes) and “daily hassles,” with the latter defined as commonly occurring stressors which are less serious in nature than major life events (Lyon, 2000). Although most research in this area prior to 1980 focused on major life events (Lyon), studies in the early 1980’s found that daily hassles were better predictors of health status (DeLongis, Coyne, Dakof, Folkman, and Lazarus, 1982) and psychological symptoms (Kanner, Coyne, Schafer, & Lazarus, 1981) than were major life events.

Coping

In Lazarus and Folkman’s cognitive mediational model, coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person” (1984, p. 141). Folkman and Lazarus (1980) distinguish between two types of coping styles: problem-focused coping and emotion-focused coping. In a large scale study of coping strategies in adults, Folkman and Lazarus found that nearly all study participants used both problem-focused and emotion-focused coping when dealing with situations they appraised as stressful (1980). Folkman and Moskowitz (2004) note that coping strategies may be either helpful or harmful to those who utilize them; for example, coping strategies which emphasize escaping from problems have been found to be related to negative mental health outcomes.

Stress in College Students

Research suggests that college students experience a great deal of stress. Academic requirements, which are often appraised as overwhelming, are compounded by
social and developmental stressors such as romantic relationships, friendships, and identity development. Larson (2006) found that college women reported that 34.2% of their activities were stressful. Academic tasks were most likely to be appraised as stressful (Larson). CASA’s national survey of college students found that 33% stated that they frequently felt overwhelmed, while 42% admitted to occasionally feeling overwhelmed (2007). CASA also reported that 88% of students perceived stress to be a problem at their school. Research suggests that the stress of college life may be increasing over time; Sax (1997) found that the percentage of first year college students who reported feeling frequently overwhelmed increased from 16% in 1985 to 25.3% in 1995. Sax found significant gender differences between men and women in terms of perceived stress. 32.5% of women reported feeling frequently overwhelmed, but only half as many men (16.6%) reported such emotions (Sax).

Stress and Alcohol Use in College Students

A number of studies have found a link between stress and substance use in college students. In a study of 1587 Midwestern college students, Broman (2005) found that stress was positively related to substance use. Park, Armeli, and Tennen (2004) studied 137 college students and found that alcohol consumption increased on days that students reported experiencing events which they characterized as stressful. O’Hare (2001) found stress to be related to excessive drinking in some contexts, but not when dealing with negative emotions. However, O’Hare found an interaction effect between drinking problems and stress, which led to excessive drinking. O’Hare suggests that his findings support a hypothesized relationship between drinking and stress in college students. McCormack (1996) found that the percentage of students who believed that drinking
represented an acceptable way to deal with stress increased from 23% in 1990 to 36% in 1994.

It should be noted that not all research substantiates a positive relationship between stress and substance use. Noel and Cohen (1997) studied 73 college students and hypothesized that their alcohol and other drug use would increase during the week prior to final examinations, due to the stress associated with preparing for the examinations. However, Noel and Cohen found that alcohol use decreased during the week prior to final examinations. Also, as noted above, O’Hare’s study found that stress was not related to alcohol use in college students unless drinking problems were also present.

Religious Coping

Religious coping theory suggests that religion offers individuals a variety of resources which may aid in coping with and overcoming stressful or difficult situations (Pargament, Ano, & Wachholtz, 2005). Pargament (1997) emphasizes the inter-relationship between coping and the human need for meaning and significance. Accordingly, Pargament states that coping entails a “search for significance in times of stress” (p. 90). Pargament goes on to state that religion provides an “orienting system” which guides and shapes the methods individuals use to find meaning in times of stress (p. 114). In addition to helping individuals to find meaning during stressful times, religious coping may also involve gaining mastery and control, gaining comfort, gaining intimacy with others, achieving closeness to God, and/or achieving life transformation (Pargament et al., 2005).
When related to substance use in college students, religious coping may counteract the academic demands, social stress, and developmental angst which are often a part of the college experience. A reduction in such stress may lead to a corresponding decrease in use of alcohol as a coping or “self-medication” tool.

Religious coping has been found to be related to a number of salutary health effects. Studies have found that religious coping is related to improved mental health and psychological functioning (Pargament, Koenig, Tarakeshwar, & Hahn, 2004; Phillips & Stein, 2007; Yangarber-Hicks, 2004), successful adjustment to chronic medical conditions (Bush et al., 1999; Nairn & Merluzzi, 2003; Yoshimoto et al, 2006), improved physical health (Pargament et al., 2004), and successful adjustment to stressful situations (Bjorck & Thurman, 2007; Schottenbauer, 2006; Smith, Pargament, Brant, & Oliver, 2000).

Positive vs. Negative Religious Coping

Pargament, Smith, Koenig, and Perez (1998) suggest that two patterns of religious coping exist. Positive religious coping is characterized by “religious forgiveness, seeking spiritual support, collaborative religious coping, spiritual connection, religious purification, and benevolent religious reappraisal” (Pargament, Smith, Koenig, & Perez, 1998, p. 710). Pargament et al. found positive religious coping to generally be related to lower levels of mental health symptomatology and higher levels of stress-related personal growth. Similarly, Cole (2005) found positive religious coping to be related to lower levels of depressive symptomatology in a pilot study of 16 cancer patients. Negative religious coping is characterized by “spiritual discontent, punishing God reappraisals, interpersonal religious discontent, demonic reappraisal, and reappraisal of God’s powers”
Pargament et al. (1999, p. 710). Pargament et al. found negative religious coping to be related to higher levels of mental health symptomatology and lower levels of personal stress-related growth. Similarly, Pearce, Singer, and Prigerson (2006) found negative religious coping to be related to Major Depressive Disorder and lower quality of life in a study of 162 caregivers for individuals with a terminal illness. Also, Cole (2005) found negative religious coping to be related to higher levels of depressive symptomatology.

**Styles of Religious Coping**

Pargament et al. (1988) identified three distinct styles of religious coping, including self-directing religious coping, deferring religious coping, and collaborative religious coping. Self-directing religious coping involves a reliance on self, rather than God, when dealing with stress. Pargament et al. note that self-directing religious coping, despite its focus on personal, rather than deistic problem-solving approaches, remains a religious coping approach, as individuals in this category frequently attribute human agency and problem-solving capability to God. Deferring religious coping involves passively shifting responsibility for problem solving to God. Collaborative religious coping occurs when individuals have a sense of partnering with God to address the problems that they are facing.

Pargament, Koenig, and Perez (2000) proposed two further religious coping styles during the development of the RCOPE (an instrument designed to measure types of religious coping). Pargament et al. suggested that pleading for divine intercession and active religious surrender represent additional styles of religious coping. Active religious surrender involves giving control of a situation to God after the individual had done all
he/she could to address the situation. Pleading for divine intercession involves bargaining with, or begging, God for miraculous intervention.

*Religious Affiliation and Religious Coping*

Religious affiliation may affect utilization and style of religious coping. A number of researchers have examined the relationship between religious and/or denominational affiliation and religious coping. In a study of 153 church members, Osborne and Vandenberg (2003) found that Catholics were more likely to engage in negative religious coping practices than were members of the (Protestant) Disciples of Christ denomination. Park, Cohen, and Herb (1990) studied religious coping, anxiety, and depression in a sample of Catholic and Protestant college students. Park et al. found that Catholic college students used religious coping to deal with controllable life events. Park et al. suggested that Catholicism’s focus on works (that is, actions which conform to the norms of Catholic faith) may induce guilt in church members, who may turn to religious coping to deal with guilt which has arisen around life events over which the church member had some control (e.g. mistakes or poor choices). Alferi, Culver, Carver, Arena, and Antoni (1999) studied 49 Hispanic women who had recently been diagnosed with breast cancer. Alferi and colleagues found that levels of distress decreased for Protestant women who engaged in religious coping practices, while distress increased for Catholic women who engaged in religious coping practices. Tix and Frazier (1998), in a study of individuals who had recently undergone a kidney transplant, found that Protestants who engaged in religious coping reported increased life satisfaction with the passage of time, while Catholics who engaged in religious coping reported an increase in distress over time.
**Religious Coping in College Students**

As mentioned earlier, research has shown that college students often perceive themselves to be under a great deal of stress. A number of studies have shown that many college students use religious coping to deal with situations which they appraise as stressful. Kolchakian and Sears (1999) found that students engaged in the following three styles of religious coping which were similar to, but slightly different than, those identified by Pargament et al. (1988): self-directing, deferring/collaborative, and eclectic, with the latter marked by intermittent interest in religiosity as a coping strategy. Schaefer and Gorsuch (1991) studied 161 students of Christian universities and found that students who utilized deferring or collaborative coping styles were less likely to suffer from anxiety than students who utilized a self-directed coping style. Hovey and Seligman (2007) studied anxiety, depression, and religious coping in a sample of 190 college students. Hovey and Seligman found relatively high mean religious coping scores among the college students in their sample; they also found that religious coping was not significantly correlated with depression or anxiety in their study and concluded that family support (which was significantly correlated with anxiety and depression) seemed to provide a stronger source of support for college students than religious coping. Oman et al (2007) found that undergraduates reported using both positive and negative religious coping. Oman et al. found that students who were involved in meditation-oriented interventions experienced significant reduction in negative religious coping.

**Religious Coping and Alcohol Use**

When the research literature was reviewed, a number of studies were found to have explored the relationship between religious coping and alcohol use. The results of
such studies have been mixed. In a longitudinal study of 123 individuals who were being treated on an outpatient basis for alcohol use disorders, Robinson et al. (2007) found a negative relationship between religious coping and alcohol use. Cotton et al. (2006) found positive religious coping to be negatively related to alcohol use in a study of 450 patients with HIV/AIDS. Brechting and Giancola (2006) found religious coping to be related to decreased rates of alcohol and other drug use in a longitudinal study of 326 adolescent boys.


*Religious Coping and Alcohol Use in College Students*

A thorough review of the literature found two studies of religious coping and substance use in college students. Daugherty and McLarty (2003) studied the relationship between religious coping and alcohol use in a sample of 178 college students. They found a significant negative correlation between religious coping and alcohol use (Daugherty and McLarty). Interestingly, Daugherty and McLarty hypothesized that religious coping would be positively related to the use of alcohol to cope with negative affective states. This hypothesis, based on previous research which suggested that various types of emotion-focused coping may be related, was not supported by Daugherty and McLarty’s research, which found no significant relationship between religious coping and coping motivation for alcohol use.
As one of the few studies to examine religious coping and alcohol use, the Daugherty and McLarty (2003) study was helpful in that it extended the knowledge base regarding religiosity/spirituality and substance use. The inclusion of a measure of reasons for alcohol use was also a strong point of the study, as it enabled the authors to begin to examine the relationship between religious coping and coping motivation for alcohol use.

Unfortunately, the Daugherty and McLarty (2003) study was also lacking in certain areas. The authors’ summarized previous research on religiosity/spirituality and substance use by discussing a few studies which found weak negative corrections between the constructs of interest. This summary ignored the large body of research which has found that religion/spirituality is protective against substance use. (Bahr, Maughan, Marcos, Li, 1998; Bell, Wechsler, & Johnston, 1997; CASA, 2001a; CASA 2001b; Engs, Diebold, & Hanson, 1996; Forthun, Bell, Peek, & Sun, 1999; Hodge, Cardenas, & Montoya, 2001; McBride, Mutch, & Chitwood, 1996; Patock-Peckham, Hutchinson, Cheong, & Nagoshi, 1998; Perkins, 1985: Stewart, 2001; Strawser, Storch, Geffken, Killiany, & Baumeister, 2004). The authors also failed to mention recent advances in the conceptualization and operationalization of religiosity and spirituality. The authors stated that religiosity was typically measured via attendance of religious services or denominational affiliation, ignoring studies which have focused on personal aspects of faith such as intrinsic religiosity (Patock-Peckham, Hutchinson, Cheong, and Nagoshi, 1998) and spirituality (Hodge, Cardenas, Montoya, 2001; Stewart, 2001). The study also measured religious coping as a unidimensional construct, ignoring recent
research which differentiates between positive and negative religious coping (Pargament et al., 1998).

Willis, Wallston, and Johnson, in a study of 551 undergraduate students, found that religious coping was negatively related to alcohol use and binge drinking in the 30 days prior to the survey (2001). Willis, Wallston, and Johnson also found that religious coping was a strong predictor of alcohol use levels in path analyses performed using a hierarchical regression model.

The Willis, Wallston, and Johnson (2001) study utilized a relatively large sample and was grounded in theory. The study tested a conceptual model whereby religiosity was hypothesized to affect alcohol use via health locus of control and religious coping. The authors tested this model via path analysis, which was conducted utilizing hierarchical regression analysis.

Unfortunately, Willis, Wallston, and Johnson, (2001) measured religious coping as a unidimensional construct, ignoring recent research which suggests that the construct may be better understood in terms of positive and negative religious coping (Pargament, Smith, Koenig, & Perez, 1998). Their measurement instrument did not allow them to study the difference between various types of religious coping or to examine whether negative religious coping may be predictive of higher rates of alcohol use.

Conceptual Model

In light of the literature reviewed in the preceding paragraphs, it seems likely that religion and spirituality protect against alcohol use in college students by lowering coping motivation for alcohol use. This suggests the need to add a stress-coping model to the traditional peer influence model used to explain the protectiveness of religiosity and
spirituality in regard to alcohol use. Such an integrated conceptual model is presented in Figure 2.

Figure 2. Conceptual Model: Pathways of Protectiveness for Religion/Spirituality in regard to College Student Alcohol Use

According to the conceptual model presented in Figure 2, stress and socialization are depicted as independent variables which are directly related to alcohol use (Abbey, Smith, and Scott, 1993; Cooper, 1994; Cooper, Frone, Russell, & Mudar, 1995; Cooper, Russell, Skinner, & Windle, 1992; Farber, Khavari, & Douglass, 1980; Stewart, Zeitlin, & Samoluk, 1996). Holmbeck (1997) notes that protective factors (such as coping) are best understood as moderating variables; accordingly, the model in Figure 2 shows the relationship between stress and alcohol use as being moderated via religious coping. Similarly, the direct relationship between socialization (which includes celebration and conformity) and alcohol use is moderated by the protective effects of peer...
Finally, this conceptual model suggests that a direct relationship may exist between religious coping and peer influence/selection.

**Additional Variable: Depressive Symptomatology**

This study was designed primarily to explore the relationships between stress, religious coping, and alcohol use in college students. However, in the process of developing this study, it was noted that previous research has found each of the primary constructs of interest to be related to depression. In addition, recent research by the American College Health Association (ACHA) suggests that depression among college students is increasing at a rapid rate (ACHA, 2001; ACHA, 2008). Due the relationship of depressive symptomatology to the study’s primary constructs of interest and the recent rise in depression among college students, the decision was made to add a short measure of depressive symptomatology to the study instrument. In light of this, the literature on depression and its relationship to stress, religious coping and alcohol use will be briefly reviewed below.

**Depression in College Students**

The diagnosis of depression in college students is increasing rapidly. The American College Health Association’s (ACHA) National College Health Assessment (NCHA) (conducted during the fall and spring semesters each year) found that 16% of college students reported being diagnosed with depression in fall 2007, a sizeable increase from the 10.1% who reported being diagnosed with depression in the fall 2000 study (ACHA, 2008; ACHA, 2001).

Although 16% of the students in the 2007 ACHA study reported being diagnosed with depression, many more reported some depressive symptomatology (ACHA, 2008).
91.6% of students reported feeling overwhelmed during the 12 months prior to the study, 88.7% reported feeling exhausted despite not having participated in physical activity, 76.5% reported instances of feeling very sad, 61.5% reported feelings of hopelessness, and 43.2% reported feeling so depressed that they had difficulty functioning (ACHA). In addition, 10.3% reported having seriously considered suicide during the 12 months prior to the study, while 1.9% reported suicide attempts in that time frame (ACHA).

Research suggests that students who struggle with depressive symptoms are unlikely to receive treatment (Furr, Westefeld, McConnell, & Jenkins, 2001; Michael, Huelsman, Gerard, Gilligan, & Gustafson, 2006). Further, Michael et al. found that most college students who do receive treatment for depression receive only psychopharmacological interventions.

**Stress and Depression**

A number of studies have found a significant positive relationship between stress and depression (Jung & Khalsa, 1989; Mazure & Maciejewski, 2003; Melchior et al., 2007; Sim, 2000). This relationship has been found both in studies which conceptualized stress in terms of major traumatic life events (Mazure & Maciejewski) and in studies which conceptualized stress in terms of daily hassles (Jung & Khalsa; Melchior et al.; Sim). For example, in a longitudinal study of 972 individuals, Melchior et al. found that work stress was related to the development of depression in individuals without a prior history of depression.

**Religious Coping and Depression**

Research suggests that there is a significant relationship between religious coping and depression (Carleton, Esparza, Thaxter, & Grant, 2008; Exline, Yali, & Sanderson,
There appears to be a negative relationship between positive religious coping and depression (Carleton, Esparza, Thaxter, & Grant; Koenig et al.). For example, in a study of 2100 urban adolescents, Carleton et al. found religious coping to be negatively related to depression. The instrument used in this study appears to have conceptualized religious coping in generally positive terms, as it was designed to measure spiritual support, social support, and community involvement (Carleton et al.).

On the other hand, negative religious coping appears to have a positive relationship to depression (Exline, Yali, & Sanderson, 2000; Pearce, Singer, & Prigerson, 2006). For example, in a study of 162 caregivers for terminally ill patients, Pearce et al. found negative religious coping to be related to prevalence of Major Depressive Disorder.

**Depression and Alcohol Use**

Research has found depression to be associated with increases in alcohol use (Alati et al., 2005; Paschall, Freisthler, & Lipton, 2005). For example, Paschall et al. found a positive relationship between alcohol use and depression in a longitudinal study of 13,892 young adults.

Interestingly, some studies have found abstinence from alcohol use to be related to higher levels of depression. This finding does not negate the consistent finding of a positive relationship between depression and high rates of alcohol use. Rather, such studies describe the relationship between alcohol and depression as a “U” or “J-shaped” curve, with moderate alcohol use predicting lower levels of depressive symptomatology, while higher levels of alcohol use and abstinence from alcohol use are related to higher rates of depression (Caldwell et al., 2002; O’Donnell, Wardle, Dantzer, & Steptoe, 2006).
For example, O’Donnell et al. found evidence of a U-shaped relationship between alcohol and depressive symptomatology in a study of 15,748 individuals from 20 countries.

The existence of a J or U-shaped relationship between alcohol use and depression does not have universal support in the research literature, as some studies have found no evidence of its existence. For example, Paschall, Freisthler, and Lipton (2005) found no significant difference between moderate alcohol users and abstainers in terms of depressive symptoms.

Final Conceptual Model

The final conceptual model (see Figure 3) includes the additional variable of depressive symptomatology and diagrams the relationship between depressive symptomatology and stress, religious coping, and alcohol use. In this conceptual model, there is a direct relationship between stress and depressive symptomatology. In keeping with Holmbeck’s (1997) contention that protective factors (such as coping) are best understood as moderating variables, religious coping moderates the effects of stress on depressive symptomatology and alcohol use. (See Carleton et al., 2008, and Lewis & Kliwer, 1996 for other examples of studies in which coping is conceptualized as a moderating variable. The model also shows a direct relationship between depressive symptomatology and alcohol use.
Overview of Study

This study will attempt to validate the upper portion of the conceptual model presented in Figure 3 by examining the relationships between stress, religious coping, depressive symptomatology, and alcohol use in college students at a religiously-affiliated institution. Because the minor stressors commonly associated with college life (for example, academic and social problems) were the focus of this study, stress was conceptualized as “daily hassles.” (See Figure 4 for conceptual model for study.) The lower portion of the model, which diagrams the relationships between socialization, peer influence/selection and college student alcohol use is equally important in understanding
college student alcohol use. However, the lower portion of the conceptual model will not be tested in this study, due to the amount of previous research which has explored the effects of socialization and peer influence on college student alcohol use (see Aseltine, 1995, Bahr, Maughan, Marcos, and Li, 1998; CASA, 2001; Cooper, 1994; Cooper, Frone, Russell, & Mudar 1995; Cooper, Russell, Skinner, & Windle, 1992; Farber, Khavari, & Douglass, 1980; McBride, Mutch, & Chitwood; Stewart, Zeitlin, & Samoluk, 1996). Because religious coping is a relatively new concept and only two studies were found to have examined its relationship to alcohol use in college students, the relationships depicted in the upper half of the conceptual model will be the focus of this study.

*Figure 4. Conceptual model for current study*

The conceptual models illustrated in Figures 2, 3, and 4 do not diagram a relationship between stress/daily hassles and religious coping. This is because religious coping was understood to be moderating variable in this study, that is, a variable which causes a change in the relationship between an independent variable and a dependent variable (Baron & Kelly, 1986). Per Holmbeck (1997) and Baron and Kelly, a model
which showed stress/daily hassles to be related to religious coping and religious coping to be related to depression and alcohol use would indicate that religious coping was a mediating variable, that is, a variable which is part of the causal process by which an independent variable is related to a dependent variable (Baron & Kelly).

This research project was designed to advance the professional knowledge base in regard to religious coping and alcohol use by exploring the relationship between religious coping and alcohol use in college students, which appears to have been studied in only two previous projects. This study attempted to build upon the findings of Daugherty and McLarty (2003) and Willis, Wallston, and Johnson (2001), in order to lend further strength to research which posits that religious coping is related to lower levels of alcohol use.

This project was also designed to advance the knowledge base by exploring the differential effects of positive and negative religious coping on alcohol use in college students, an area which does not appear to have been studied to date. This was deemed an important area for further study, as it seemed likely that negative religious coping, which includes “spiritual discontent, punishing God reappraisals, interpersonal religious discontent, demonic reappraisal, and reappraisal of God’s powers” (Pargament, Smith, Koenig, & Perez, 1999, p. 710) would be linked to higher levels of alcohol use in college students. Such findings would have been consistent with studies which have found that negative religious coping to be related to increased levels of mental health symptomatology (Cole, 2005; Pargament, Smith, Koenig, & Perez, 1999; Pearce, Singer, & Prigerson, 2006).
This study took place at a religiously-affiliated college in Northeast Ohio. Although the college is affiliated with a specific religious denomination, its 1680 undergraduate students report being affiliated with 45 different religious denominations. Some students report having no religious affiliation, as the university does not require students to practice or be affiliated with a religion. The religious nature of the institution and its denominational diversity suggest that students may engage in a variety of religious coping practices; this seemed likely to lead to sufficient variability in terms of positive vs. negative religious coping practices among students. Also, the institution does not require students to practice or be affiliated with a religion; this seemed to increase the likelihood of sufficient variability on the religious coping and alcohol use variables.

Conducting the study at a religiously-affiliated institution also allowed the researchers to explore a growing population which may currently be understudied. Religiously-affiliated institutions of higher education have experienced a great deal of recent growth. Between 1990 and 2002, enrollment at religious colleges increased 60% (Riley, 2005). This growth is even more remarkable given that enrollment at public and private, non-sectarian schools has remained flat during this same period (Riley). The growth in enrollment at religious schools, combined with the relative lack of social science research which has explored the experiences of students at such schools, offered another compelling reason for studying alcohol use and religious coping at a religiously-affiliated college.

Research Questions, Hypotheses, and Rationales for Hypotheses
This exploratory, cross-sectional study will explore the following research questions and test the following hypotheses in a sample of students at a religiously-affiliated college:
Q 1: How are daily hassles related to college students’ alcohol use?
H 1: Increases in daily hassles will be associated with increases in college students’ alcohol use.
Rationale: Research by Broman (2005) found daily hassles to be related to increases in drug use and alcohol problems among college students.

Q 2: How is religious coping related to college students’ alcohol use?
H 2.1: Increases in positive religious coping will be associated with decreases in college students’ alcohol use.
Rationale: Cotton et al. (2006) found positive religious coping to be negatively related to alcohol use in a study of individuals who had been diagnosed with HIV/AIDS. Also, Pargament et al. (1998) found that positive religious coping was related to salutary outcomes such as lower levels of mental health symptomatology and higher levels of personal stress-related growth. In light of these findings which show that positive religious coping is related to health-promoting outcomes, it is hypothesized that positive religious coping is also related to lower levels of alcohol use.
H 2.2: Increases in negative religious coping will be associated with increases in college students’ alcohol use.
Rationale: Pargament et al. (1998) found that negative religious coping was related to outcomes such as higher levels of mental health symptomatology and lower levels of personal stress-related growth. Similarly, Pearce, Singer, and Prigerson (2006) found negative religious coping to be related to Major Depressive Disorder and lower quality of life. In light of these findings which show that negative religious coping is related to
unhealthy outcomes, it is hypothesized that negative religious coping is also related to higher levels of alcohol use.

Q3: Does religious coping moderate the relationship between daily hassles and alcohol use in college students?

H3: Positive religious coping will moderate the relationship between daily hassles and alcohol use.

Rationale: Carleton et al. (2008) found that religious coping (which was conceptualized in a generally positive manner) moderated the relationship between daily hassles and depression in college women. It is hypothesized that positive religious coping will also moderate the effects of daily hassles on other measures of psychological adjustment, such as alcohol use.

Q 4: How are daily hassles related to depressive symptomatology in college students?

H 4: Increases in daily hassles will be associated with increases in depressive symptomatology in college students.

Rationale: Previous research has consistently found a significant positive relationship between daily hassles and depressive symptomatology (Jung & Khalsa, 1989; Melchior et al., 2007; Sim, 2000).

Q 5: How is religious coping related to depressive symptomatology in college students?

H 5.1: Increases in positive religious coping will be associated with decreases in depressive symptomatology in college students.

Rationale: Carleton et al. found religious coping to be negatively related to depression. The instrument used in this study appears to have conceptualized religious coping in
generally positive terms, as it was designed to measure spiritual support, social support, and community involvement (Carleton et al.).

H 5.2: Increases in negative religious coping will be associated with increases in depressive symptomatology in college students.

_Rationale_: Exline, Yali, and Sanderson (2000) and Pearce, Singer, & Prigerson (2006) found negative religious coping to have a positive relationship to depression.

Q6: Does religious coping moderate the relationship between daily hassles and depressive symptomatology in college students?

H6: Positive religious coping will moderate the relationship between daily hassles and depressive symptomatology.

_Rationale_: Bjorck and Thurman (2007) found that positive religious coping moderated the relationship between negative life events and depression. Carleton, Esparza, Thaxter, and Grant (2008) found that religious coping (which the authors conceptualized in a generally positive manner) moderated the relationship between daily hassles and depressive symptomatology, although only in the females in their sample.

Q 7: What is the nature of the relationship between depressive symptomatology and alcohol use in college students?

H 7: There will be a “J”or “U-shaped” relationship (with abstainers and heavy drinkers exhibiting higher levels of depressive symptomatology than moderate drinkers) between depressive symptomatology and alcohol use.

Chapter 3: Methodology

Study Design

This study of daily hassles, religious coping and alcohol use in college students is cross-sectional and captured a “snapshot” of data at a single point in time. The study consisted of survey research at a religiously-affiliated college in the American Midwest. This institution was chosen because the denominational and religious diversity of the student population (students are not required to belong to a specific religious denomination or to participate in a religion) appeared likely to lead to sufficient variability in the study’s variables. The dearth of social science research on the experiences of students of religiously-affiliated colleges was also a factor in the selection of the institution.

Data Collection

This study focused on students in the institution’s traditional undergraduate program. Individuals who were older than traditional age college students were considered to be part of the traditional undergraduate program.

This study surveyed students during their regularly scheduled academic classes. Students were surveyed during the 1:00-2:15 PM class period on Tuesdays and Thursdays in mid-April. Tuesday/Thursday classes were chosen because they last for one hour and fifteen minutes, as opposed to Monday/Wednesday/Friday classes, which last only fifty minutes. It seemed likely that faculty would be more willing to allow a researcher to utilize 20 minutes of a longer Tuesday/Thursday class. The 1:00-2:15 PM time slot was chosen because it was heavily populated and consisted of a wide variety of classes, including upper level courses and introductory courses from a variety of majors,
as well as general education courses. The wide variety of courses during the 1:00-2:15
time slot was predicted to lead to a representative sample. Of the 36 classes scheduled
during the targeted time, 25 classes participated in the study.

All instructors who taught a traditional undergraduate course during 1-2:15 time
slot on Tuesdays and/or Thursdays received a personal e-mail from the researcher,
requesting permission to utilize approximately 20 minutes of class time to administer the
survey instrument. The classes of all instructors (N=25) who answered in the affirmative
were included in the sample. Instructors were asked to designate either the beginning or
end of class as the time for data collection. A team of five student research assistants was
trained to administer the survey. (The researcher also assisted in survey administration).
The student research assistants were provided with a standardized set of instructions and
procedures to utilize when administering the survey. The student assistants were
required to count the number of students in the course on the day the survey was
administered, collect all completed questionnaires, and return all completed surveys to
the researcher immediately. Candy bars were offered to all members of classes in which
the survey was administered, regardless of whether or not they completed the survey.
Gift cards to a national chain store were given to all student assistants in order to
reimburse them for their time in administering the survey.

This data collection strategy was modeled after one which had been used
successfully in the past at the institution. In November 2007, a research methods class
undertook a study of perceptions of racial prejudice at the institution. The methodology
for the racial prejudice study involved student researchers administering surveys in
classes of faculty who were contacted via e-mail messages. Of the 27 faculty members
who taught classes which met during the targeted time slot, 13 gave permission for the racial prejudice survey to be distributed to their classes. Data collection took place in 12 classes (one instructor cancelled class due to illness). Faculty members were generally positive about the experience of allowing students to come to their classes. College administrators agreed to allow the researcher to collect data for the current study via the data collection strategy used in the racial prejudice study.

Two observations related to data collection during the perceptions of racial prejudice study were incorporated into the data collection strategy of the current study. During the data collection phase of the perceptions of racial prejudice study, most faculty members did not respond to the first e-mail request for permission to collect data in their classrooms. However, when a second request was sent, a number of faculty quickly responded and granted permission for the researchers to collect data in their classes. Also, most faculty members preferred that data collection took place at the beginning of their class. Accordingly, for this study, personalized e-mail reminders were sent to any faculty members who did not respond to the initial request for access to their classes and an adequate number of student workers who were available to collect data at 1:00 PM (the beginning of class) on Tuesdays and Thursdays were recruited and trained to administer the survey.

Sample Size

A power analysis was conducted using G*Power 3.08. This power analysis calculator “was designed as a general stand-alone power analysis program for statistical tests commonly used in social and behavioral research” (Faul, Erdfelder, Lang, & Buchner, 2007, p. 175). The G*Power software has been utilized and recommended by a
number of social/behavioral scientists (see Levin, 1997; Sheppard, 1999). The results of the power analysis indicated that a sample size of 216 participants would provide adequate power for the detection of medium and large effect sizes for all statistical analyses necessary to test the study’s hypotheses. Per Cohen (1988), power was set at .80 for the power analysis.

Six hundred and seventy-six students (676) were enrolled in the 36 classes which met between 1:00 and 2:15 PM on Tuesdays and Thursdays. Twenty-six (26) instructors (72.2% of those eligible for inclusion in the study) gave permission for the survey to be administered in their classes. One instructor mistakenly dismissed his class early on the day scheduled for data collection, resulting in the survey being administered in 25 classes (69.4% of the classes which met at 1:00 PM on Tuesdays and Thursdays). 427 students were present in classes which received the survey. Of these, 423 completed the survey, for a 99% response rate.

Human Subjects Protection

Prior to data collection, a research proposal was approved by the Institutional Review Board (IRB) of Case Western Reserve University. Following approval by the Case Western Reserve IRB, a research proposal was also submitted to the IRB of the institution where the study was conducted. The researcher had also previously discussed the proposed project with the administration of the college and received permission to proceed with the project, pending the approval of the Case Western Reserve IRB and the IRB of the college where the study will be undertaken. Confidentiality of respondents was preserved by instructing participants not to include any identifying information on their survey instruments. Also, participants were given a blank envelope and instructed
to place the survey in the blank envelope and deposit it in a drop box in the front of the room. Participants were asked to follow this procedure whether or not they chose to complete the survey. All completed surveys were immediately returned to the researcher and kept in a locked file cabinet.

Timing of Data Collection

Data collection for the study was completed during the last two weeks of the Spring 2008 semester. Given the increased amount of academic work which most students experience at the end of a semester, it seems likely that exposure to daily hassles is elevated for many students at this point in the semester. This increased workload may result in a lower amount of alcohol use than usual. To some degree, the study’s instruments controlled for unusual effects related to the end of the semester by asking students to report on their alcohol use and exposure to daily hassles over the 30 days prior to taking the survey.

Conceptual/Operational Definitions and Instrumentation

Religious Coping

Religious coping is defined as the use of religious resources to manage or overcome events, situations, or emotions which an individual has appraised as stressful (Pargament, Ano, & Wachholtz, 2005). For this study, religious coping was operationalized as scores on the positive and negative religious coping subscales of the Brief RCOPE. It should be noted that the Brief RCOPE was not designed to yield a total scale score indicative of overall religious coping (K. Pargament, personal communication, July 21, 2008).
Pargament et al. (1998) discuss religious coping as an overarching construct which includes both positive and negative religious coping. Positive religious coping is characterized by the perception that an individual’s relationship with God is strong and by the belief that life is meaningful (Pargament et al.). Positive religious coping is defined as the management of events, situations, or emotions through the use of religious resources which are related to an individual’s perception of a strong relationship with God and/or tendency to find meaning in life (Pargament, Ano, & Wachholtz, 2005; Pargament et al., 1998). Positive religious coping was operationalized as an individual’s score on the Positive Religious Coping subscale of the Brief RCOPE.

Negative religious coping is characterized by perceptions of insecurity in an individual’s relationship to God, religious turmoil, and a pessimistic worldview (Pargament et al., 1998). Negative religious coping is defined as the management of events, situations, or emotions through the use of religious resources which are related to an individual’s perception of an insecure relationship with God, religious turmoil, and/or pessimistic worldview (Pargament, Ano, & Wachholtz, 2005; Pargament et al., 1998). Negative religious coping was operationalized as an individual’s score on the Negative Religious Coping subscale of the Brief RCOPE.

The Brief RCOPE (Pargament et al., 1998) is a 14-item measure of religious coping. The Brief RCOPE uses a four-point Likert scale, with responses ranging from 1 (not at all) to 4 (a great deal), to determine the degree to which respondents utilize positive and negative religious coping practices (Pargament et al.). The Brief RCOPE consists of two subscales; one seven-item subscale measures positive religious coping, while the other seven-item subscale measures negative religious coping. The positive
religious coping items include measures of spiritual connection, the degree to which respondents seek spiritual support, religious forgiveness, collaborative religious coping, benevolent religious reappraisal, religious purification, and religious focus (Pargament et al.). The negative religious coping items include measures of spiritual discontent, punishing God reappraisal, interpersonal religious discontent, demonic reappraisal, and reappraisal of God’s power (Pargament et al.). The Brief RCOPE was developed and tested with two samples, a sample of 540 college students and a sample of 551 hospital patients. In both samples, the scale was found to have strong psychometric properties (Pargament et al.). Internal consistency for the Brief RCOPE was high, as evidenced by Cronbach’s alpha scores of .90 for the Positive Religious Coping subscale and .81 for the Negative Religious Coping subscale in the college student sample (Pargament et al). The sample of hospital patients yielded Cronbach’s alpha scores of .87 for the Positive Religious Coping subscale and .69 for the Negative Religious Coping subscale (Pargament et al). Support for the construct validity of the subscales was also found when they were tested for convergent and discriminant validity by examining the relationships between the subscales and measures of mental health (Pargament et al.). These comparisons found that positive religious coping was generally related to positive mental health outcomes, while negative religious coping was generally related to negative mental health outcomes (Pargament et al.).

The items on the positive religious coping subscale fit well with Lazarus and Folkman’s conceptualization of coping as “cognitive and behavioral efforts to manage specific internal and/or external demands that are appraised as taxing or exceeding the resources of a person” (1984, p. 141). For example, one of the positive religious coping
subscale items measures the degree to which individuals manage angry emotions by seeking help from God.

Items on the negative religious coping subscale relate to the following themes: questioning God’s love or wondering whether God has abandoned one; understanding stressful situations as a punishment from God, wondering as to whether one has been abandoned by one’s religious community, attributing stressful situations to demonic forces, and questioning the power of God. These beliefs may appear to contradict standard conceptualizations of coping activities; however, they fit Lazarus and Folkman’s conceptualization of coping in that they offer individuals resources for the management of stressful situations (1984). The following paragraphs will explain how each of the negative religious coping practices measured by the Brief RCOPE’s Negative Religious Coping subscale fits with standard conceptualizations of coping.

Pargament (1997) explains that negative religious coping practices which involve spiritual or interpersonal religious discontent (i.e., wondering as to whether one has been abandoned by God or the church) may represent a displacement of problematic emotions, such as anger, onto God or one’s religious community. In light of this, one could cope with a situation appraised as stressful by becoming angry at (or feeling abandoned by) God or one’s religious community (Pargament, 1997). Of course, such a coping skill would be unlikely to lead to problem resolution and may, in fact, add to an individual’s stress; hence the designation of such activities as “negative religious coping.”

Another type of negative religious coping strategy involves viewing stressful situations as punishments from God or a demonic force (Pargament, 1997; Pargament, Smith, Koenig, & Perez, 1998). This may represent a coping behavior in that it may
allow an individual to avoid blaming him/herself for his/her involvement in stressful situations. Again, use of such a coping strategy may have negative results in that the individual who views a stressor as a supernatural act may be less likely to take action to address or resolve the stressful situation. Because of this, such a strategy is considered to exemplify negative religious coping.

Questioning God’s power is the final category of negative religious coping measured by the Brief RCOPE. Again, this type of behavior may not appear at first glance to constitute a coping activity. However, Pargament (1997) points out that coping often involves attempts to conserve meaning during stressful situations. Pargament suggests that a religious individual who is involved in a stressful situation may find it difficult to believe in God or a higher power. Such doubt may be problematic for the individual, because it negates a belief which is important to the individual (Pargament). Thus, in order to cope by conserving meaning during a difficult time, an individual may choose to believe that God was not powerful enough to stop the stressful situation from occurring (Pargament). Such a belief preserves the individual’s religious faith at a time when he or she may feel threatened by doubt (Pargament).

Daily Hassles

Daily hassles are defined as minor events which are appraised as noxious or unpleasant. In this study, exposure to daily hassles was operationalized as a score on the Inventory of College Students’ Recent Life Experiences (ICSRLE).

The ICSRLE is a 49-item scale consisting of seven subscales, which measure developmental challenge, time pressure, academic alienation, romantic problems, assorted annoyances, general social mistreatment, and friendship problems (Kohn,
Lafrenière, and Gurevich, 1990). Respondents are asked to use a four-point Likert scale to indicate the degree to which various daily hassles have been a part of their life during the preceding 30 days, with responses ranging from 1 (not at all a part of my life) to 4 (very much a part of my life). It should be noted that the ICSRLE measures daily hassles as the degree to which noxious events have been experienced by respondents, rather than measuring respondents’ appraisals of such events. However, Kohn et al. did construct the ICSRLE entirely from items which exhibited statistically significant correlations to Cohen et al.’s Perceived Stress Scale (PSS). Because the PSS measures appraised stress, the Kohn et al. state that the ICSRLE “retain[s] an indirect relationship to the stress-appraisal process (p. 621). The authors validated the instrument with a sample of 208 Canadian college students and reported a Cronbach’s alpha score of .88 (Kohn et al.). Kohn et al. also reported the following Chronbach’s alpha scores for the instrument’s subscales: .79 for the Developmental Challenge subscale, .80 for the Time Pressure subscale, .79 for the Academic Alienation subscale, .73 for the Romantic Problems subscale, .47 for the Assorted Annoyances subscale, .76 for the General Social Mistreatment subscale, and .68 for the Friendship Problems subscale (Kohn et al.). The subscales are composed of 37 of the instrument’s 49 items; Kohn et al. also retained 12 items which did not load on any subscale when exploratory factor analysis was used to determine the dimensionality of the scale. During the initial development of the scale, only items which correlated with Cohen et al.’s Perceived Stress Scale (PSS) were retained (Kohn et al.). Because the PSS measures appraised stress, this procedure was intended to ensure some degree of convergent validity between the two scales (Kohn et al.).
Osman, Barrios, Longnecker, and Osman (1994) validated the ICSRLE in a sample of American college students. This study found Cronbach’s alpha scores of .80 for the Developmental Challenge, Time Pressure, and General Social Mistreatment subscales, .78 for the Academic Alienation subscale, .77 for the Friendship Problems subscale, .69 for the Romantic Problems subscale, and .54 for the Assorted Annoyances subscale. Osman et al. also reported a Cronbach’s alpha score of .92 for the total scale. Based on these findings, the authors concluded that the internal consistency of the instrument was “satisfactory” (Osman et al.). Osman et al. found evidence of convergent validity by comparing the ICSRLE to accepted measures of stress. Discriminant validity was examined via exploratory factor analysis, which was used to explore whether the ICSRLE was correlated to the Brief Symptom Inventory (BSI, a measure of psychopathology) (Osman et al.). This analysis found that, with one exception, the subscales of the BSI and the ICSRLE loaded on separate factors, a finding which supported the discriminant validity of the ICSRLE (Osman et al.).

Both Kohn et al. (1990) and Osman et al. (1994) found the Assorted Annoyances subscale to have Cronbach’s alpha scores lower than the .65 score suggested by DeVellis (2003) as minimally acceptable. Because of this, and because the current study found the subscale to have a Cronbach’s alpha score lower than .65, this subscale was not used in this study’s analyses, although the individual items were retained for use in the complete scale.

Depressive Symptomatology

Depressive symptomatology is defined as the presence of negative affective features related to a pervasive feeling of sadness. In this study, depressive
symptomatology was operationalized as a score of ten or higher on the ten-item Center for Epidemiologic Studies Depression Scale (CESD-10) (Andresen, Malmgren, Carter, & Patrick, 1994).

The CESD-10 uses a four-point Likert scale with responses ranging from 0 (rarely or none of the time) to 3 (all of the time) to record how often respondents have experienced depressive symptomatology during the prior week. Andresen et al (1994) developed the CESD-10 using items from the longer Center for Epidemiologic Studies Depression Scale (CES-D). Andresen et al. reported that the CESD-10 “showed good predictive accuracy when compared to the full-length 20-item version of the CES-D (kappa= .97, p<.001)” (p. 77). Andresen et al. found evidence of convergent and discriminant validity, as the CESD-10 was found to be positively correlated to poor health status and negatively correlated to positive affect. Andresen et al. studied the reliability of the CESD-10 and found test-retest reliability to be good. Andresen et al. reported a correlation of r=.59 between initial scores and scores when the scale was readministered twelve months later. Pressman et al. administered the CESD-10 to a sample of 83 college students and reported a Cronbach’s alpha score of .79. The Stanford Patient Education Center (n.d.) reported that Lorig, Sobel, Ritter, Laurent, and Hobbs’ 2001 study of 605 individuals with chronic disease found the CESD-10 to have a Cronbach’s alpha score of .84. (The Stanford Patient Education Center’s website notes that Lorig et al. did not report Cronbach’s alpha scores in their 2001 article.) Miller, Anton, and Townson (2008) reported a Cronbach’s alpha score of .86 in a study of 47 individuals with spinal cord injuries.
The CESD-10 contains two items which measure positive affect. The wording of these items is opposite that of the eight other items, necessitating that these items be reverse-scored.

Andresen et al. (1994) note that the CESD-10 screens for the presence of depressive symptoms. Andresen et al. state that the CESD-10 is not a measure of clinical depression.

*Alcohol Use*

Alcohol use is defined as the consumption of fermented beverages such as wine, beer, or liquor. In this study, alcohol use was operationalized as a score on the Drinking Patterns subscale of the Student Alcohol Questionnaire (Engs, 1977), which was developed and normed on samples of college students. Alcohol use was also operationalized via two additional items. The first item asked respondents to report the number of days in which they had an alcoholic drink during the 30 days immediately prior to taking the survey. The second item asked participants to record the usual number of alcoholic drinks they consumed on days when they drank alcohol during the 30 days immediately prior to taking the survey. These quantity and frequency (QF) items are commonly used in research on alcohol consumption (Dawson, 2003). For example, Daugherty and McClarty (2003), and Brown and Vanable (2007) use similar items to measure alcohol consumption. In this study, the quantity and frequency measures were multiplied together in order to obtain a new variable-“drinks in the past 30 days”-which was sensitive to both quantity and frequency of alcohol use.

The Drinking Patterns subscale of the Student Alcohol Questionnaire (SAQ) consists of six items (Engs, 1977). Three items ask respondents how often they drink
beer, wine, and liquors and spirits, respectively. Responses range from 1 (every day) to 5 (once a year or less). The other three items in this subsection ask respondents to clarify the average amount of alcohol used on each occasion. Responses range from 1 (more than six drinks/glasses/cans) to 5 (less than one drink/glass/can). Respondents are asked to skip any section which asks about a type of alcohol which they do not drink. The Drinking Patterns subscale was designed to correspond to a quantity-frequency (Q-F) index (Engs). Engs states that the Q-F was developed by a number of other researchers (Straus & Bacon; Maxwell, Mulford, & Miller; Cahalan et al.; Maddox & Miller) and incorporated into the SAQ.

Engs (1977) reported that responses to the items in the Drinking Patterns subscale were used to classify respondents into one of six drinking styles categories. Engs categories included: abstainer (an individual who drinks alcohol less than one time per year), infrequent drinker (an individual who drinks alcohol at least one time per year, but less than once a month), light drinker (an individual who drinks alcohol at least one time per month, but does not consume more than one to three drinks per occasion), moderate drinker (an individual who drinks alcohol at least one time per month but consumes no more than three to four drinks per occasion or who drinks alcohol at least one time per week, but consumes no more than one to two drinks per occasion), moderate-heavy drinker (an individual who consumes three to four drinks at least one time per week or who consumes five or more drinks at least one time per month), or heavy drinker (an individual who consumes five or more drinks per occasion on more than one occasion per week) (Engs). In this study, the categories listed above were modified slightly, as it was discovered during data analysis that the categories did not fit with the SAQ’s
quantity/frequency measures. Also, some of Eng’s original categories were not exhaustive, leaving open the possibility that an individual would not fit into any of the drinking styles categories. In light of this, the following categories were used in this study: abstainer (an individual who never drinks alcohol), infrequent drinker (an individual who drinks alcohol one time per year or less), light drinker (an individual who drinks alcohol more than once a year, but less than once a month, or who drinks two or less drinks at least once a month but less than once a week, or who drinks alcohol on a daily or weekly basis but consumes less than one drink per occasion) moderate drinker (an individual who drinks three or four drinks at least once a month but less than once a week or who drinks one or two drinks on a daily or weekly basis), moderate-heavy drinker (an individual who drinks five or more drinks at least once a month, but less than once a week or who drinks three or four drinks at least once a week but not every day), heavy drinker (an individual who drinks five or more drinks at least once a week but not every day, or who drinks three or more drinks on a daily basis).

Engs (1977) reported that initial face validity for the SAQ was established by having panels of experts and college students review and comment on the instrument. Engs reported that the panel of experts was asked to comment on a pool of potential items, which led to the development of the initial instrument, which was then reviewed and commented upon by the panel of college students. After further revisions to the instrument, the panel of experts again reviewed and commented on the instrument (Engs). Final revisions were then made and the student panel again reviewed and commented upon the instrument (Engs).
Engs (1977) also reported finding an acceptable level of test-retest reliability. 122 college students completed the SAQ on two occasions at a one month interval. The overall test-retest reliability was .79, with individual items ranging from .61 to .92 (Engs). Engs and Hanson (1994) reported specifically on the reliability of the Drinking Patterns subscale of the SAQ. In a sample of 6534 college students, Engs and Hanson report a Spearman-Brown reliability coefficient of .84 and a Cronbach’s alpha coefficient of .86.

*Instrumentation Copyrights and Permissions Information*

The researcher received permission from the developers of instruments which were not in the public domain to use their instruments in this research project. Dr. Ruth Engs of Indiana University gave permission for the SAQ to be used in this study. Dr. Ken Pargament of Bowling Green State University gave permission for the Brief RCOPE to be used in this study. Dr. Paul Kohn of York University gave permission for the ICSRLE to be used in this study. Because the CESD-10 was developed via federally-funded research, it is considered to be public domain and may be used without permission.

*Demographic and Other Variables*

The instrument used in this study asked respondents to indicate their gender, class standing (*freshman, sophomore, junior, or senior*), race/ethnicity, and age in years. The instrument also included single-item measures of the following constructs: frequency of mother’s alcohol use while growing up, frequency of father’s alcohol use while growing up, and church’s attitude toward alcohol use. These items were designed to be used to
control for family and church/denomination effects, in order to avoid confounding the effects of these variables with those of religious coping.

Pre-testing

This instrument was pre-tested by three current students at the college at which the study took place (these students did not have classes during the times the survey was administered and thus were not eligible for inclusion in the sample) and by a graduate of a similar religiously-affiliated college. The study instrument was only pre-tested with four individuals because it used primarily items and instrument used in previous research. Because these items and instruments had been validated in previous research, pre-testing with a large number of individuals was not considered to be necessary. The pre-testers generally found the instrument to be satisfactory, but most found the instructions of the Brief RCOPE to be somewhat confusing. The confusion seemed to stem from the wording of the first sentence, which stated, “The following items deal with ways you coped with the negative event in your life” (Pargament et al., 1998). Pre-testers were confused by the term “the negative event,” which seemed to them to imply a specific event, although no further instructions were given to identify the negative event which was to be their frame of reference when completing the instrument. In light of this confusion, a decision was made to change the first sentence to read, “The following items deal with ways you coped with a negative event in your life.”

Data Entry

Data were double-entered into SPSS Version 16.0. After all data had been entered twice, the files were compared in order to identify data entry errors. These errors were corrected in the final SPSS data file.
Chapter 4: Results

Description of Sample

The data collection strategy used in this study yielded 423 completed questionnaires. The study’s sample was well in excess of the minimum sample size of 216 suggested by a power analysis performed with G*Power 3.08 software. The 423 students in the sample represented approximately 25% of the 1680 undergraduates enrolled at the institution. In this sample, 64% of respondents were female; in the overall student population at the institution, 61% of the students were female. In terms of academic class, 17% of respondents were freshman, 17% were sophomores, 26% were juniors, and 39% were seniors. In the overall student population, 34% of students were freshman, 19% sophomores, 20% juniors, and 26% seniors. In terms of race, 90% of respondents were Caucasian, 5% were African-American, 1% were Asian or Pacific Islander, 1% were Hispanic/Latino, 1% reported being of mixed racial descent, and 1% identified themselves as “other.” American Indians made up less than 1% of the sample. In the overall student population, 93% of students were Caucasians, 5% were African-Americans, 1% were Hispanic, 1% were Asian/Pacific Islander, and .1% were American Indian. Data regarding students of mixed racial descent were not available. The mean age of students in the sample was 21.72 years of age ($SD=4.42$), with a range of 18-65. The age range and mean age of undergraduate students at the institution was not available. 92% of the students in the sample were between the ages of 18-24 years of age (i.e., they were “traditional-age” college students). The demographic distribution of the sample was fairly representative of that of the institution, although juniors and seniors
were somewhat over-represented in the sample (See Table 1 for an overview of the demographic characteristics of the sample).

The demographic characteristics of this study’s sample were similar to those reported for US undergraduates in general. The Digest of Education Statistics 2007 (Snyder, Dillow, & Hoffman, 2008) reported that 57% of US undergraduate college students were female, 66% were Caucasian, 13% were African American, and 65% were between the ages of 18 and 24. In this study, 61% of respondents were female, 93% were Caucasian, 5% were African-American, and 92% were between the ages of 18 and 24.
**Table 1. Demographics of Sample (n=423)**

<table>
<thead>
<tr>
<th>Demographics of Sample</th>
<th>Demographics of College</th>
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</thead>
<tbody>
<tr>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
</tr>
<tr>
<td><strong>Range</strong></td>
<td><strong>Range</strong></td>
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<tr>
<td><strong>n</strong></td>
<td><strong>n</strong></td>
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<tr>
<td><strong>%</strong></td>
<td><strong>%</strong></td>
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<tr>
<td><strong>Age</strong></td>
<td><strong>Age</strong></td>
</tr>
<tr>
<td><strong>21.72 (4.42)</strong></td>
<td><strong>18-65</strong></td>
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<tr>
<td><strong>Race</strong></td>
<td><strong>Race</strong></td>
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<tr>
<td>Caucasian</td>
<td>382 90.3</td>
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<tr>
<td>African-American</td>
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<tr>
<td>Asian/Pacific Islander</td>
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</tr>
<tr>
<td>Hispanic/Latino</td>
<td>6 1.4</td>
</tr>
<tr>
<td>American Indian/Alaskan</td>
<td>1 0.2</td>
</tr>
<tr>
<td>Native</td>
<td></td>
</tr>
<tr>
<td>Mixed Racial Descent</td>
<td>5 1.2</td>
</tr>
<tr>
<td>Other</td>
<td>4 0.9</td>
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<td>Senior</td>
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<tr>
<td>Junior</td>
<td>111 26.2</td>
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<tr>
<td>Sophomore</td>
<td>71 16.8</td>
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<tr>
<td>Freshman</td>
<td>73 17.3</td>
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<tr>
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<td>0 0</td>
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<tr>
<td>Male</td>
<td>269 36.4</td>
</tr>
<tr>
<td>Female</td>
<td>154 63.6</td>
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</table>

*** Information unavailable
Univariate Analyses

Univariate statistics were generated for each of the study’s variables (see Table 2). The mean ICSRLE score for this sample was 97.07 (SD = 18.26). The median ICSRLE score was 95. The mean score on the Brief RCOPE’s Positive Religious Coping subscale was 19.81 (SD = 4.94). The mean score on the Brief RCOPE’s Negative Religious Coping subscale was 9.85 (SD = 3.64). The mean CESD-10 score was 10.96 (SD = 5.17). The mean number of drinking days in the previous 30 days was 2.42 (SD = 3.94), while the mean number of drinks per drinking day was 1.59 (SD = 2.54). The mean number of drinks in the previous 30 days was calculated by multiplying respondent’s number of drinking days in the previous 30 days by their number of reported drinks per drinking day. The mean score for drinks in the past 30 days was 9.05 (SD = 19.61). The median score for drinks in the past 30 days was 0.0.

The SAQ was used to place respondents on a drinking patterns continuum consisting of the following categories: abstainer (an individual who never drinks alcohol), infrequent drinker (an individual who drinks alcohol one time per year or less), light drinker (an individual who drinks alcohol more than once a year, but less than once a month, or who drinks two or less drinks at least once a month but less than once a week, or who drinks alcohol on a daily or weekly basis but consumes less than one drink per occasion) moderate drinker (an individual who drinks three or four drinks at least once a month but less than once a week or who drinks one or two drinks on a daily or weekly basis), moderate-heavy drinker (an individual who drinks five or more drinks at least once a month, but less than once a week or who drinks three or four drinks at least once a week but not every day), heavy drinker (an individual who drinks five or more
drinks at least once a week, or who drinks three or more drinks on a daily basis) (See Figure 5). 4.5% of study participants (19 individuals) were categorized as heavy drinkers, 9.9% (42 respondents) were categorized as moderate-heavy drinkers, 11.6% (49 respondents) were categorized as moderate drinkers, 31% (131 respondents) were categorized as light drinkers, 16.3% (69 respondents) were categorized as infrequent drinkers, and 26.7% (113 respondents) were categorized as abstainers. By comparison, Engs, Diebold, & Hanson (1996) administered the SAQ to a national sample of over 12,000 college students and found that 21% were heavy drinkers, 27% were abstainers, and 52% were light/moderate drinkers (some categories were collapsed in the Engs et al. study).
Table 2. Summary of Univariate Analyses (n=423)

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<tr>
<th></th>
<th>M (SD)</th>
<th>Range</th>
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<tbody>
<tr>
<td>ICSRLE Total Score</td>
<td>97.07 (18.26)</td>
<td></td>
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<tr>
<td>ICSRLE Subscales</td>
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<td></td>
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<tr>
<td></td>
<td>Time Pressures</td>
<td>18.72 (4.21)</td>
<td>7-28</td>
</tr>
<tr>
<td></td>
<td>Academic Alienation</td>
<td>6.52 (2.21)</td>
<td>3-12</td>
</tr>
<tr>
<td></td>
<td>Romantic Problems</td>
<td>5.54 (2.35)</td>
<td>3-12</td>
</tr>
<tr>
<td></td>
<td>General Social Mistreatment</td>
<td>10.30 (3.41)</td>
<td>6-23</td>
</tr>
<tr>
<td></td>
<td>Friendship Problems</td>
<td>5.13 (1.82)</td>
<td>3-12</td>
</tr>
<tr>
<td>Brief RCOPE</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Positive RC Subscale</td>
<td>19.82 (4.94)</td>
<td>7-28</td>
</tr>
<tr>
<td></td>
<td>Negative RC Subscale</td>
<td>9.85 (3.64)</td>
<td>7-24</td>
</tr>
<tr>
<td></td>
<td>CESD-10</td>
<td>10.96 (5.17)</td>
<td>0-27</td>
</tr>
<tr>
<td></td>
<td>Drinking Days in Past 30</td>
<td>2.42 (3.94)</td>
<td>0-20</td>
</tr>
<tr>
<td></td>
<td>Drinks per Drinking Day</td>
<td>1.60 (2.54)</td>
<td>0-20</td>
</tr>
<tr>
<td></td>
<td>Drinks in past 30 days</td>
<td>9.05 (19.62)</td>
<td>0-140</td>
</tr>
<tr>
<td></td>
<td>SAQ Drinking Patterns</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Heavy</td>
<td>19</td>
<td>4.5</td>
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<tr>
<td></td>
<td>Moderate-Heavy</td>
<td>42</td>
<td>9.9</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>49</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>Light</td>
<td>131</td>
<td>31.0</td>
</tr>
<tr>
<td></td>
<td>Infrequent</td>
<td>69</td>
<td>16.3</td>
</tr>
<tr>
<td></td>
<td>Abstainer</td>
<td>113</td>
<td>26.7</td>
</tr>
</tbody>
</table>
Skewness and kurtosis scores were reviewed to ensure that the distribution of the study’s variables was approximately normal (i.e., skewness <2, kurtosis <7). With the exception of the alcohol use variables (drinking days in past 30, drinks per drinking day,
and drinks per month), all variables were normally distributed. The high skewness and kurtosis scores for the alcohol use variables violated the assumption of normality necessary for multiple regression analysis. Because of this, scores on the drinks per month variable were transformed by adding one and computing a base 10 logarithm prior to being entered as the dependent variable in a series of multiple regression models. This transformation yielded skewness and kurtosis scores acceptable for multiple regression analysis.

Psychometric Properties of Measures

The psychometric properties of the four scales (the ICSRLE, the Brief RCOPE, the CESD-10, and the Drinking patterns subscale of the SAQ) used in this study were also analyzed. When appropriate, the factor structure of each scale was analyzed via exploratory factor analysis (EFA). Fabrigar, Wegener, MacCallum, and Strahan (1999) suggest the use of maximum likelihood (ML) or principal factors models for factor extraction in research with psychological variables such as the ones in this study. Fabrigar et al. also suggest the use of oblique rotation methods, as such methods are sensitive to the intercorrelation among factors which is commonly present in social science research. A principal factors extraction method (Principal Axis Factoring) was used in conjunction with an oblique rotation method (Direct Oblimin Rotation) to analyze the factor structure of the scales used in this study (Fabrigar et al.). Items were considered for inclusion in a factor if they loaded at the .30 level or above (Pett, Lackey, & Sullivan, 2003). The overall factor structure of the scale was evaluated in two ways. Factors with eigenvalues greater than 1.0 were considered for retention (DeVellis, 2003). Also, scree plots were examined and the number of factors which were above an “elbow”
created when eigenvalues began to trend toward a horizontal line were considered for retention (DeVellis).

The dimensionality of the scales was also studied by examining the loadings of the individual items. Oblique rotation methods (such as the Direct Oblimin method used in these analyses) yield two matrices of item loadings: the structure matrix and the pattern matrix. The structure matrix was primarily used to identify and interpret factors, while the pattern matrix was also examined for the purpose of comparison (Pett, Lackey, & Sullivan, 2003). The item loadings reported are from the structure matrices.

Because multicollinearity between items violates the assumptions of EFA, item correlation matrices were examined to ensure that inter-item correlations of .80 or greater were not present. Unless otherwise noted, inter-item correlations were less than .80.

Internal consistency of the study’s scales was analyzed by calculating a Cronbach’s alpha coefficient for each scale (and subscale) used in the study. The minimum level of acceptability for alpha scores was set at .65 (DeVellis, 2003).

ICSRLE

The developers of the ICSRLE described it as having seven subscales and 12 items which did not load on any subscale but which were retained in the overall scale (Kohn et al., 1990). Osman et al. (1994) found that Confirmatory Factor Analysis (CFA) with LISREL supported the factor structure reported by Kohn et al.

The factor structure of the ICSRLE was analyzed using Principal Axis Factoring with Direct Oblimin rotation, as described above. The initial analysis, in which SPSS was not constrained to any number of factors, produced inconsistent results. An
examination of the scree plot suggested the presence of three factors, whereas the
eigenvalue greater than one rule suggested a 14-factor solution.

In order to better understand the dimensionality of the scale, the item loadings in
the pattern and structure matrices were examined. This examination found that the factor
structure of five of the subscales was similar to that described by Kohn et al. (1990) and
Osman et al. (1994). The three items on the Academic Alienation subscale (“disliking
your studies,” “dissatisfaction with school,” and “finding courses uninteresting”) loaded
on a single factor and exhibited individual item loadings of .65-.73. An additional item
(“disliking fellow students”) exhibited a marginal loading of .35 on the same factor. EFA
also found a factor containing only the items in the Kohn et al.’s Romantic Problems
subscale. The three items in the Friendship Problems subscale (“being let down or
disappointed by friends,” “conflicts with friends,” and “having your trust betrayed by a
friend” loaded on a single factor and exhibited item loadings of .60-.82. An additional
item (“gossip concerning someone you care about”) loaded at .54 on the same factor. Six
of the seven items on the Time Pressure subscale (“not enough leisure time,” “not enough
time to meet your obligations,” “a lot of responsibilities,” too many things to do at one,”
“not enough time for sleep,” and “interruptions of your school work”) loaded on a single
factor. However, an additional item (“hard effort to get ahead”) also loaded at .44 on the
same factor. Also, one item on the Time Pressure subscale (“heavy demands from
extracurricular activities”) loaded on a different factor. Four of the six items on the
General Social Mistreatment subscale (“social isolation,” being ignored,” “loneliness,”
and “social rejection”) loaded on the same factor. The remaining items (“being taken for
granted” and “being taken advantage of”) loaded on a separate factor. Because each of
the subscales discussed above approximated the original structure of Kohn et al.’s subscales, they were retained for use in this study.

Two subscales were markedly different than Kohn et al.’s (1990) subscales. The ten items on the Developmental Challenge subscale loaded on four different factors. The five items on the Assorted Annoyances subscale also loaded on four different factors. Because of this marked difference from Kohn et al.’s subscales, the Developmental Challenge subscale and the Assorted Annoyances subscale were not used in analyses in this study.

The five ICSRLE subscales used in this study showed acceptable internal consistency, as indicated by their Cronbach’s alpha scores. The Time Pressure subscale had a Cronbach’s alpha score of .72. The Academic Alienation subscale had a Cronbach’s alpha score of .73. The Romantic Problems subscale had a Cronbach’s alpha score of .74. The General Social Mistreatment subscale had a Cronbach’s alpha score of .80. The Friendship Problems subscale had a Cronbach’s alpha score of .74. In comparison, Kohn et al. (1990) reported Cronbach’s alpha scores of .80 for the Time Pressures subscale, .79 for the Academic Alienation subscale, .73 for the Romantic Problems subscale, .76 for the General Social Mistreatment subscale, and .68 for the Friendship Problems subscale.

The appropriateness of the use of the ICSRLE as an overall (i.e., single factor) measure of daily hassles was examined via EFA utilizing a Principal Axis Factoring model. For this analysis, SPSS was constrained to a one-factor solution. The one-factor solution produced loadings greater than .30 for all but five of the 49 ICSRLE items. “Poor health of a friend” and “conflicts with boyfriend’s/girlfriend’s/spouse’s family) had
loadings of .29. “Dissatisfaction with your athletic skills” had a loading of .28. “Failing to get expected job” had a loading of .26. “Heavy demands from extra-curricular activities” had a loading of .13. A decision was made to retain these items in the overall scale, based on the following rationale. First, prior research (Kohn et al., 1990; Osman et al., 1994) had established the usefulness of the entire measure. Second, the overall measure (with all items included) was found to have a strong Cronbach’s alpha score of .91, indicating that the measure was internally consistent. (This score was similar to the Cronbach’s alpha score of .88 reported by Kohn et al., 1990.) Third, the elimination of the five items with loadings below .30 did not raise the instrument’s overall Cronbach’s alpha score.

**Brief RCOPE**

EFA using Principal Axis Factoring with Direct Oblimin rotation supported the two-dimensional structure of the Brief RCOPE. Although EFA found three eigenvalues above 1.0, two of these scores (4.32 and 3.27) were far in excess of 1.0, while the third (1.04) barely exceeded 1.0. When the scree plot was examined, it was clear that only two factors were above the scree created when the eigenvalues began to level to an approximately horizontal slope.

Examination of individual item loadings confirmed the two dimensional nature of the instrument as reported by Pargament et al. (1998). The items on the Positive Religious Coping Subscale all loaded on a single factor, with individual item loadings ranging from .84 to .57. The items on the Negative Religious Coping subscale all loaded on a second factor, with individual item loadings ranging from .40 to .76. Although the EFA solution approached simple structure, three of the Negative Religious Coping items
also loaded on a third factor. “Felt punished by God for my lack of devotion” loaded on the third factor at .83, as compared to .41 on the second factor. “Wondered what I did for God to punish me” loaded on the third factor at .76, as compared to .61 on the second factor. “Wondered whether God had abandoned me” loaded on the third factor at .74, as compared to .56 on the second factor. However, in light of Pargament et al.’s previous research with this measure, the conceptual similarities of the negative religious coping items, the fact that all three items discussed above listed at above the .30 level on the second factor, and examination of the scree plot (which pointed to a two-factor solution), understanding the Brief RCOPE as a two-dimensional measure appeared to be most appropriate.

The Brief RCOPE does not yield an overall religious coping score; rather, the two subscales are designed to be summed and used as separate measures of positive and negative religious coping, respectively (K. Pargament, personal communication, July 21, 2008). In light of this, Cronbach’s alpha scores were calculated for the two subscales. The Positive Religious Coping subscale had a Cronbach’s alpha score of .88, while the Negative Religious Coping subscale had a Cronbach’s alpha score of .82. These scores indicate that both subscales have a strong degree of internal consistency. These scores were similar to those reported by Pargament et al (1998), who found the Cronbach’s alpha score for the Positive Religious Coping subscale to be .90 and that of the Negative Religious Coping subscale to be .81.

**CESD-10**

Because this study used the CESD-10 as a unidimensional measure of depressive symptomatology, EFA was performed via Principal Axis Factoring and constrained to a
one factor solution. Although two eigenvalues greater than 1.0 were found in this analysis, the scree plot seemed to indicate a one-factor solution. Nine of the ten CESD-10 items exhibited loadings between .47 and .78. One item (“I felt hopeful about the future”) loaded only at .10. The decision was made to retain this item in the final analysis, as previous research has documented the validity, reliability, and internal consistency of the CESD-10 (Andresen et al., 1994; Lorig et al., 2001; Miller et al., 2008). Also, the CESD-10 was found to have a fairly strong Cronbach’s alpha score of .79, which is indicative of good internal consistency. (Removal of the item which loaded at the .10 level would have only improved the Cronbach’s alpha score, by .02.) By comparison, Miller et al. (2008) found the CESD-10 to have a Cronbach’s alpha score of .86.

SAQ: Drinking Patterns Subscale

EFA was not utilized with the Drinking Patterns subscale of the SAQ, as it is not a summative scale, but rather a measure of quantity and frequency of alcohol use. The Drinking Patterns subscale’s inappropriateness for EFA was confirmed by examining the inter-item correlation matrix, which found correlations above .80 between the quantity and frequency measures for each alcoholic beverage. The Drinking Patterns subscale was found to have a good level of internal consistency, as shown by it’s Cronbach’s alpha score of .89. By comparison, Engs and Hansen reported a Cronbach’s alpha score of .86 for the SAQ’s Drinking Patterns subscale.

Bivariate Analyses

Bivariate correlations were calculated for the variables in the study (see Table 3). Measures of mother’s alcohol use, father’s alcohol use, and church stance on alcohol use
were analyzed as potential covariates which might be related to alcohol use in college students. (Please note: The item related to church stance on alcohol use included response categories for non-attenders and those who were unsure of their church’s stance on this issue. Because these categories are not suitable for correlational analysis, the church stance variable was transformed to exclude respondents who indicated non-attendance or uncertainty regarding their church’s stance on alcohol use.) Most of the correlations between these variables and the alcohol use variables were not statistically significant, although significant weak positive correlations were found between mother’s alcohol use and drinking days in the past 30 days ($r = .15, p < .01$) and between church stance on alcohol use (higher scores indicated greater acceptance of alcohol use) and drinks per drinking day ($r = .14, p < .05$). The results of the remaining correlational analyses will be discussed in the hypothesis testing section. Correlations of .1 were considered to be indicative of small effect size, while correlations of .3 were considered to be indicative of moderate effect size and correlations of .5 and higher were considered to be indicative of large effect size (Cohen, 1988).
Table 3. Bivariate Correlations for Major Study Variables (N= 423)

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<tr>
<th></th>
<th>1</th>
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<td>2. Ac Alien</td>
<td>.23**</td>
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<td>.20**</td>
<td>.28**</td>
<td>.56**</td>
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<td>7. Pos RC</td>
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<td>.05</td>
<td>.12*</td>
<td>.13**</td>
<td>.15**</td>
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<td>8. Neg RC</td>
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<td>.21**</td>
<td>.22*</td>
<td>.43**</td>
<td>.32**</td>
<td>.43**</td>
<td>.13**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. CESD-10</td>
<td>.36**</td>
<td>.31**</td>
<td>.31**</td>
<td>.60**</td>
<td>.37**</td>
<td>.62**</td>
<td>.04</td>
<td>.46**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Drink Days</td>
<td>.00</td>
<td>.13**</td>
<td>.10*</td>
<td>-.02</td>
<td>.05</td>
<td>.06</td>
<td>-.24**</td>
<td>.02</td>
<td>.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Drinks/Day</td>
<td>-.03</td>
<td>.12*</td>
<td>.12*</td>
<td>-.01</td>
<td>.05</td>
<td>.07</td>
<td>-.26**</td>
<td>.11*</td>
<td>.03</td>
<td>.52**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>12. Drinks/Month</td>
<td>-.04</td>
<td>.10*</td>
<td>.08</td>
<td>-.01</td>
<td>.05</td>
<td>.05</td>
<td>-.23**</td>
<td>.07</td>
<td>.01</td>
<td>.83</td>
<td>.74**</td>
<td>.100</td>
</tr>
</tbody>
</table>

Note: Time Pressures = Time Pressures subscale of ICSRLE; Ac Alien = Academic Alienation subscale of ICSRLE; Rom Prob = Romantic Problems subscale of ICSRLE; Soc Mis = General Social Mistreatment subscale of ICSRLE; Friend Prob = Friendship Problems subscale of ICSRLE, ICSRLE = Inventory of College Students’ Recent Life Experiences; Pos RC = Positive Religious Coping subscale of Brief RCOPE; Neg RC = Negative Religious Coping Subscale of Brief RCOPE; CESD-10 = Center for Epidemiologic Studies Depression Scale – Short Form, Drink Days = drinking days in the past 30 days; Drinks/Day = Drinks per drinking day in past 30 days; Drinks/Month = drinking days in past 30 days x drinks per day in past 30 days.

* p < .05, **p < .01
Hypothesis Testing

*H 1: Increases in daily hassles will be associated with increases in college students’ alcohol use.*

Correlations were run to determine the nature of the relationship between scores for the ICSRLE and the alcohol use variables: drinking days in the past 30 days, drinks per drinking day, and drinks in the past 30 days (drinking days x drinks per drinking day) (see Table 3). Correlations were also run between the ICSRLE subscales and the alcohol use measures. No statistically significant correlations were found between the ICSRLE total scale score and the alcohol use measures. Weak, but statistically significant positive correlations were observed between the Academic Alienation subscale of the ICSRLE and drinking days in past 30 days ($r = .13$, $p < .01$), drinks per drinking day ($r = .12$, $p < .05$), and drinks in the past 30 days ($r = .10$, $p < .05$). Weak, but statistically significant positive correlations were also observed between the Romantic Problems subscale of the ICSRLE and drinking days in past 30 days ($r = .10$, $p < .05$) and drinks per drinking day ($r = .12$, $p < .05$).

A one-way ANOVA was run to determine whether there was a significant difference in mean ICSRLE scores among the various types of drinkers. This analysis found no significant difference between the mean ICSRLE scores for each type of drinker ($F = 1.97$, $df = 5/413$, $p = .08$, $eta^2 = .02$).

Hypothesis one was partially supported, in that certain types of daily hassles (i.e., academic alienation and romantic problems) were found to be weakly correlated to alcohol use.
**H 2.1: Increases in positive religious coping will be associated with decreases in college students’ alcohol use.**

Correlations were run to determine the nature of the relationship between scores for the Brief RCOPE’s Positive Religious Coping Subscale and scores on the alcohol use measures: drinking days in the past 30 days, drinks per drinking day, and drinks in past thirty days (drinking days x drinks per drinking day) (see Table 3). Statistically significant negative correlations were observed between the Brief RCOPE’s Positive Religious Coping Subscale and drinking days in the past 30 days ($r = -.24, p < .001$), drinks per drinking day ($r = -.26, p < .001$), and drinks in the past 30 days ($r = -.23, p < .05$).

A one-way ANOVA was run to determine whether there was a significant difference in mean scores on the Brief RCOPE’s Positive Religious Coping subscale among the various types of drinkers. A significant difference in positive religious coping scores was found ($F = 8.40, df = 5/414, p < .001$, $eta^2 = .09$). Post hoc testing with Bonferroni revealed significant differences between the positive religious coping scores of heavy drinkers ($M = 17.00, SD = 5.11$) and infrequent drinkers ($M = 21.41, SD = 4.44, p < .01$), heavy drinkers ($M = 17.00, SD = 5.11$) and abstainers ($M = 21.14, SD = 4.45, p < .01$), moderate-heavy drinkers ($M = 17.12, SD = 5.09$) and infrequent drinkers ($M = 21.41, SD = 4.44, p < .001$), moderate-heavy drinkers ($M = 17.12, SD = 5.09$) and abstainers ($M = 21.14, SD = 4.45, p < .001$), moderate drinkers ($M=18.29, SD = 5.29$) and infrequent drinkers ($M = 21.41, SD = 4.44, p < .01$), and moderate drinkers($M=18.29, SD = 5.29$) and abstainers ($M = 21.14, SD = 4.45, p < .01$).
Hypothesis 2.1 was supported, as a negative relationship between alcohol use and religious coping was found via correlational analysis and further substantiated ANOVA.

H 2.2: Increases in negative religious coping will be associated with increases in college students’ alcohol use.

Correlations were run to determine the nature of the relationship between scores for the Brief RCOPE’s Negative Religious Coping Subscale and scores on the alcohol use measures: drinking days in the past 30 days, drinks per drinking day, and drinks in the past 30 days (drinking days x drinks per drinking day) (see Table 3). A statistically significant weak positive correlation was observed between the Brief RCOPE’s Negative Religious Coping Subscale and drinks per drinking day ($r = .11$, $p < .05$). The Negative Religious Coping Subscale was not found to have a statistically significant relationship to the two other measures of alcohol consumption.

A one-way ANOVA was run to determine whether there was a significant difference in mean negative religious coping scores among the various types of drinkers. This analysis found no significant difference between the mean negative religious coping scores for each type of drinker ($F = 1.32$, $df = 5/413$, $p = .26$, $eta^2 = .02$).

H3: Positive religious coping will moderate the relationship between daily hassles and alcohol use in college students.

Analysis Procedure:

A hierarchical multiple regression analysis was used to determine if the Brief RCOPE’s Positive Religious Coping subscale moderated the statistically significant relationship between the Academic Alienation subscale of the ICSRLE and drinks per month. The multiplicative alcohol use variable drinks in the past 30 days (drinking days
in past 30 x drinks per drinking day) was used in these analyses because it was sensitive
to both quantity and frequency of alcohol use.

As suggested by Aiken and West (1991), Baron and Kelly (1986), Carleton et al.
(2008), Coulton and Chow (1992), and Holmbeck (1997), alcohol use scores were
regressed on the daily hassles variable scores, religious coping variable scores, and a
multiplicative interaction term consisting of the daily hassles and religious coping
variable scores. If the interaction terms were found to be significant, religious coping
was considered to have a moderating effect on the relationship between daily hassles and
alcohol use (Aiken & West; Baron & Kelly; Carleton et al.; Coulton & Chow;
Holmbeck).

Prior to running the hierarchical multiple regression analysis, the bivariate
correlation matrix was examined to ensure that multicollinearity between the variables
(which violates the assumptions necessary for multiple regression analysis) was not a
problem. No inter-item correlations of $r \geq .80$ were observed, indicating that
multicollinearity between the variables was not present.

Academic Alienation and Positive Religious Coping scores were centered by
subtracting the mean score from each individual score (Aiken & West, 1991; Holmbeck,
1997). The centered scores were then multiplied together to create an interaction term.
This procedure is necessary to avoid multicollinearity between the independent variables
and the interaction term (Holmbeck 1997).

In the hierarchical multiple regression model, Academic Alienation subscale
scores were entered in the first block and the scores of the Brief RCOPE’s Positive
Religious Coping subscale were entered in the second block. The third block consisted
of an interaction term developed by multiplying Academic Alienation subscale scores by Religious Coping subscale scores.

In the hierarchical multiple regression analysis (see Table 4) the first block explained 1% of the variance in drinks per month and was statistically significant ($R^2 = .01, p \leq .05$). The second block explained a statistically significant additional 5% of the variance in drinks per month ($\Delta R^2 = .05, p < .001$). The third block, which contained the interaction term, did not explain any additional variance in drinks per month and was not significant in the model ($\Delta R^2 = .00, p = .87$). The overall model was significant ($F = 8.57, df = 3/403, p < .001, R^2 = .06, \text{adj} R^2 = .05$). In the model, only positive religious coping significantly predicted drinks per month ($t = -4.64, p < .001$), although academic alienation approached significance ($t = 2.01, p = .046$).

Hypothesis 3 was not supported, as multiple regression analysis found that the interaction of academic alienation and positive religious coping did not affect alcohol use in a statistically significant manner.

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>$R$</th>
<th>$B$</th>
<th>SE $B$</th>
<th>$\beta$</th>
<th>Block $\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 Academic Alienation</td>
<td>.10</td>
<td>.89</td>
<td>.44</td>
<td>.10</td>
<td>.01</td>
</tr>
<tr>
<td>Step 2 Positive RC</td>
<td>.15</td>
<td>-.89</td>
<td>.19</td>
<td>-.22</td>
<td>.05***</td>
</tr>
<tr>
<td>Step 3 Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ac. Alienation x Positive RC</td>
<td>.00</td>
<td>-.01</td>
<td>.08</td>
<td>-.01</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note.* Total $R^2 = .06$. $F(3,403) = 8.57, p < .001$. ***$p < .001$
H 4: Increases in daily hassles will be associated with increases in depressive symptomatology in college students.

Correlations were run to determine the nature of the relationship between scores on the ICSRLE and the CESD-10. Correlations were also run between each ICSRLE subscale and the CESD-10. A statistically significant positive correlation was found between overall ICSRLE scores and CESD-10 scores ($r = .62, p < .001$). Statistically significant positive correlations were also found between the CESD-10 and each of the five ICSRLE subscales retained for use in this study: Time Pressure ($r = .36, p < .001$), Academic Alienation ($r = .31, p < .001$), Romantic Problems ($r = .31, p < .001$), General Social Mistreatment ($r = .60, p < .001$), and Friendship Problems ($r = .37, p < .001$).

Hypothesis 4 was supported, as correlational analyses found a statistically significant relationship between daily hassles and depressive symptomatology.

H 5.1: Increases in positive religious coping will be associated with decreases in depressive symptomatology.

Correlations were run to determine the nature of the relationship between scores on the Brief RCOPE’s positive religious coping subscale and the CESD-10. No significant correlation was found between these two variables ($r = .03, p = .45$) (see Table 3).

Hypothesis 5.1 was not supported, as correlational analyses did not find a statistically significant relationship between positive religious coping and depressive symptomatology.
H 5.2: Increases in negative religious coping will be associated with increases in depressive symptomatology in college students.

Correlations were run to determine the nature of the relationship between scores on the Brief RCOPE’s negative religious coping subscale and the CESD-10. A significant positive correlation was found between these variables (r = .46, p < .001).

Hypothesis 5.2 was supported, as correlational analyses found a positive relationship between negative religious coping and depressive symptomatology.

H6: Positive religious coping will moderate the relationship between daily hassles and depressive symptomatology in college students.

A hierarchical multiple regression analysis was used to determine if the Brief RCOPE’s Positive Religious Coping subscale moderated the statistically significant relationship between overall ICSRLE scores and CESD-10 scores. CESD-10 scores were regressed on the ICSRLE scores, Brief RCOPE Positive Religious Coping subscale scores, and a multiplicative interaction term consisting of the daily hassles and religious coping variable scores (Aiken & West, 1991; Baron and Kelly, 1986; Carleton et al., 2008; Coulton & Chow, 1992; Holmbeck, 1997). If the interaction terms were found to be significant, religious coping was considered to have a moderating effect on the relationship between daily hassles and depressive symptomatology (Aiken & West; Baron & Kelly; Carleton et al.; Coulton & Chow; Hombeck).

Prior to running the hierarchical multiple regression analysis, the bivariate correlation matrix was examined to ensure that multicollinearity between the variables (which violates the assumptions necessary for multiple regression analysis) was not
present. No inter-item correlations of $r \geq .80$ were observed, indicating that multicollinearity between the variables was not a problem.

ICSRLE and Positive Religious Coping scores were centered by subtracting the mean score from each individual score (Aiken & West, 1991; Holmbeck, 1997). The centered scores were then multiplied together to create an interaction term. This procedure is necessary to avoid multicollinearity between the independent variables and the interaction term (Holmbeck 1997).

In the hierarchical multiple regression model, ICSRLE scores were entered in the first block and the scores of the Brief RCOPE’s Positive Religious Coping subscale were entered in the second block. The third block consisted of an interaction term developed by multiplying ICSRLE scores by Religious Coping subscale scores.

In the hierarchical multiple regression analysis (see Table 5) the first block explained a statistically significant 40% of the variance in depressive symptomatology ($R^2 = .40, p < .001$). The second block failed to explain additional variance in depressive symptomatology ($\Delta R^2 = .00, p = .13$). The third block, which contained the interaction term, did not explain any additional variance in depressive symptomatology and was not significant in the model ($\Delta R^2 = .00, p = .92$). The overall model was significant ($F = 90.14, df= 3/402, p < .001, R^2 = .40, \text{adj } R^2 = .40$). In the model, only daily hassles significantly predicted depressive symptomatology ($t= -4.64, p < .001$).

Hypothesis 6 was not supported, as multiple regression analysis found that the interaction of daily hassles and positive religious coping did not affect depressive symptomatology in a statistically significant manner.
Table 5. Hierarchical Regression Predicting CESD-10 Score (Depressive Symptomatology)

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Block ΔR²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 Daily Hassles</td>
<td>.40***</td>
</tr>
<tr>
<td>Step 2 Positive RC</td>
<td>.00</td>
</tr>
<tr>
<td>Step 3 Interaction</td>
<td>.00</td>
</tr>
<tr>
<td>Daily Hassles x</td>
<td>.00</td>
</tr>
<tr>
<td>Positive RC</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note. Total $R^2 = .40$. $F(3,402) = 90.14, p < .001$. *** $p < .001$

**H 7: There will be a J or U-shaped relationship (with abstainers and heavy drinkers exhibiting higher levels of depressive symptomatology than moderate drinkers) between depressive symptomatology and alcohol use in college students.**

A one-way ANOVA was run to determine whether there was a significant difference in mean CESD-10 scores among the various types of drinkers. This analysis found no significant difference between the mean CESD-10 scores of each type of drinker ($F = 1.01, df = 5/405, p = .41, \text{eta}^2 = .01$).

Hypothesis 7 was not supported. ANOVA found no evidence of a j or u-shaped relationship between depressive symptomatology and alcohol use.

Correlations were run to test for the possibility of a statistically significant linear relationship between scores on the CESD-10 and each of the following alcohol use variables: drinking days in the past 30 days, drinks per drinking day, drinks in past thirty days (drinking days x drinks per drinking day). No significant correlations were found between CESD-10 scores and any of the alcohol use variables.

**Bonferroni Correction**

Some researchers utilize a Bonferroni correction in order to avoid Type I error due to repeated statistical procedures (Cabin & Mitchell, 2000; Nakagawa, 2004). The
Bonferroni correction typically consists of dividing alpha by the number of statistical tests used, with the result being a lower alpha level (which, in theory, guards against Type I error) (Nakagawa). However, Rothman (1990) suggests that the use of such statistical procedures increases the likelihood of committing type II errors and contradicts “the basic premises of empirical research, which holds that nature follows regular laws that may be studied through observations” (p.43). Rothman suggests that adjustments such as the Bonferroni correction inappropriately penalize researchers for engaging in observation of phenomena, the foundational act of empirical research.

Rothman’s (1990) concerns seemed to be especially salient in light of the exploratory nature of the current study, which was designed to study relationships between variables which had been rarely studied in previous research. Lowering alpha, and thus decreasing the likelihood of identifying significant relationships between the constructs of interest, appeared to be illogical in light of the aims of the research project.
Chapter 5: Discussion

This study examined daily hassles, religious coping, depressive symptomatology, and alcohol use in a sample of students at a religiously affiliated university. The study’s purpose was to explore the possibility that religious coping offers an explanation for the protectiveness of religiosity and spirituality against alcohol use in college students. The protectiveness of religiosity and spirituality is commonly explained in the research literature on this topic as a feature of peer influence. This study also sought to examine the differential effects of positive and negative religious coping on alcohol use in college students. A religiously-affiliated college was chosen because students at such colleges represent an understudied population.

The results of this study suggest that students at religiously affiliated schools differ significantly from their peers at other institutions in terms of their alcohol use. This study found that 50.8% of students reported alcohol use in the 30 days prior to completing the survey instrument; while 7.3% reported drinking five or more drinks per drinking occasion. In contrast, Johnston et al. (2007) reported that 65.4% of college students surveyed in a national study reported drinking in the past 30 days and 40% reported episodes of heavy drinking (drinking five or more drinks on a single occasion during the two weeks prior to the survey).

Discussion of Hypothesis Testing

*H 1: Increases in daily hassles will be associated with increases in college students’ alcohol use.*

This hypothesis was partially supported by the findings of this study. Overall ICSRLE scores were not found to have a statistically significant relationship to the
alcohol use variables in the study. However, two specific types of daily hassles, academic alienation and romantic problems, were found to be related to alcohol use in college students, although the relationship was relatively weak (i.e., correlations of $r = .10$ to $13$). Interestingly, previous research by Larson (2006) found similar stressors—academic activities and relational issues—to be the most common types of stressors experienced by college students.

Previous research by Broman (2005), Park, Armeli, and Tennen (2004), O’Hare (2001), and McCormack (1996) suggests that daily hassles and similar non-traumatic forms of stress are related to alcohol use among college students. The current study found only weak support for this relationship. This finding may indicate that stress-related drinking is less common at religiously-affiliated schools. If so, it may be that the reduced access to alcohol and stricter enforcement policies on such campuses lead students to avail themselves of other coping mechanisms. Reduced access and stricter enforcement may also lead students who use alcohol to do so in social settings off-campus. Such settings may tend to be more focused on social drinking and less conducive to stress/coping motivated alcohol use.

Although previous research has found daily hassles to be related to alcohol use in college students, the relationship between specific types of stressors and alcohol use in college students appears to have been studied only rarely by social science researchers. McCormack (1996), in a study of college student attitudes toward alcohol use, found that 21% of students found drinking due to social pressure to be appropriate, while 13% stated that alcohol use was an appropriate response to financial problems and 18% stated that alcohol use was an appropriate response to family problems. Broman (2005) studied the
differential effects of daily hassles and traumatic stress on substance use among college
students and found both types of stress to be related to increases in substance use.
Interestingly, the current study found academic alienation and alcohol use to have a
moderate positive relationship, but Noel and Cohen (1997) reported that alcohol use went
down during the week prior to final examinations, the time period during which the
researchers hypothesized that academic stress would be highest. In light of the
conflicting nature of the current research on the relationships between specific types of
stress and alcohol use in college students, this is an area in need of further research.

\textit{H 2.1: Increases in positive religious coping will be associated with increases in college
students’ alcohol use.}

This hypothesis was supported by the findings of this study. Statistically
significant negative correlations ($r = -.23$ to $-.26$) were found between positive religious
coping scores and each of the alcohol use variables. Also, when the positive religious
coping scores were examined by drinking pattern category, students who were classified
as heavy, moderate-heavy, or moderate drinkers were found to have significantly lower
positive religious coping scores than students who were classified as infrequent drinkers
or abstainers.

These findings support previous research (Brechting & Giancola, 2006;
Daugherty & McLarty, 2003; Robinson et al., 2007; Willis et al., 2001) which suggests
that religious coping is related to lower levels of alcohol use. Such research has tended to
conceptualize religious coping in a generally positive fashion, but has not studied the
differential effects of positive and negative religious coping. Cotton et al. did study
positive and negative religious coping and found positive religious coping to be related to
lower levels of alcohol use in HIV/AIDS patients. The current study appears to be the first to examine the differential effects of positive and negative coping on alcohol use in college students. The findings of this study also fit with prior research which has found positive religious coping to be related to desirable health outcomes such as lower levels of psychopathology (Cole, 2005; Pargament et al., 1998).

H 2.2: Increases in negative religious coping will be associated with increases in college students’ alcohol use.

Minimal support was found for the hypothesis that negative religious coping would be related to alcohol use in college students. A statistically significant correlation was found between negative religious coping and drinks per drinking day, but this correlation was relatively weak ($r = .11$). No statistically significant relationship was found between negative religious coping and the other alcohol use variables (drinking days in the previous 30 days and drinks in the past 30 days). Also, when mean negative religious coping scores were compared for each of the drinking pattern categories, no statistically significant differences were found.

This result is somewhat surprising, as previous research has linked negative religious coping to higher rates of psychopathology and lower quality of life. It seems possible that the fear of divine punishment which characterizes negative religious coping may offset the coping motivation for alcohol use among individuals with high levels of negative religious coping. This “cancelling out” of coping motivation for alcohol use by fear of divine punishment associated with negative religious coping may explain this study’s lack of findings in this area. This explanation might also account for the weak positive correlation between negative religious coping and drinks per drinking day. It
may be that individuals who have overcome the fear of divine punishment and decided to consume alcohol tend to use relatively higher levels of alcohol per episode. This would fit with the theory of the “paradoxical use” discussed by Bahr and Hawks (1995). This finding sheds some light on the relationship between negative religious coping and alcohol use among students at a small, religiously-affiliated college. The finding raises additional questions regarding the concept of negative religious coping, its definition, and its relationship to stress, alcohol use, and coping.

**H3: Positive religious coping will moderate the relationship between daily hassles and alcohol use in college students.**

This hypothesis was not supported by the findings of this study. Although positive religious coping was statistically significant in a hierarchical multiple regression model designed to explore predictors of drinks per month and academic alienation approached significance, the interaction of these two variables was not statistically significant in the model. Such a finding indicates that a moderating effect is not present (Baron and Kelly, 1986).

In this study, the finding that positive religious coping did not moderate the relationship between daily hassles and alcohol use is hardly surprising, as only a weak relationship between certain types of daily hassles and alcohol use was found. It would be interesting to re-examine this hypothesis in a sample in which there was a stronger relationship between stress and alcohol use. A number of researchers have found such a relationship (Broman, 2005; O’Hare, 2001; Park et al., 2004).
H 4: Increases in daily hassles will be associated with increases in depressive symptomatology in college students.

This hypothesis was supported by the findings of this study. A statistically significant strong positive correlation ($r = .62$) was found between ICSRLE scores and CESD-10 scores. This finding supports previous research which has found daily hassles to be related to high levels of depressive symptomatology (Jung & Khalsa, 1989; Melchior et al., 2007; Sim, 2000).

H 5.1: Increases in positive religious coping will be associated with decreases in depressive symptomatology in college students.

This hypothesis was not supported by the findings of this study. No statistically significant relationship was found between positive religious coping and depressive symptomatology in college students. This finding is surprising in light of previous research which has found positive religious coping to be related to lower levels of depressive symptomatology (Carleton et al, 2008; Pargament et al, 1998). It may be that the depressive symptoms identified in the current study were linked to students’ feelings of being overwhelmed by end-of-semester stress; perhaps religious coping is not effective in addressing reactive depressive symptomatology.

H 5.2: Increases in negative religious coping will be associated with increases in depressive symptomatology in college students.

This hypothesis was supported by the findings of this study. A statistically significant positive correlation was found between negative religious coping and depressive symptomatology in this study ($r=.46$). This finding fits with previous research which has shown negative religious coping to be related to elevated rates of
psychopathology (Cole, 2005; Exline et al., 2000; Pargament et al, 1998; Pearce et al., 2006).

H6: Positive religious coping will moderate the relationship between daily hassles and depressive symptomatology in college students.

This hypothesis was not supported by the findings of this study. Although daily hassles explained a significant amount of the variance in depressive symptomatology in a hierarchical multiple regression model, the interaction of daily hassles and religious coping failed to account for further variance. Such a result indicates the absence of a moderating effect (Baron & Kelly, 1986).

H7: There will be a J or U-shaped relationship (with abstainers and heavy drinkers exhibiting higher levels of depressive symptomatology than moderate drinkers) between depressive symptomatology and alcohol use in college students.

This hypothesis was not supported by the findings of this study. Possible linear relationships were tested for via correlational analyses and curvilinear relationships were tested for by running a one-way ANOVA to examine levels of depressive symptomatology in each alcohol use pattern category. Neither analysis found a statistically significant relationship between alcohol use and depressive symptomatology. The findings in this study contradict previous research which has found evidence of a “J” or “U-shaped” relationship between depressive symptomatology and alcohol use (Caldwell et al., 2002; O’Donnell et al., 2006; Peele & Brodsky, 2000).

The lack of a statistically significant relationship between depressive symptomatology and alcohol use among the college students who participated in this study seems to fit conceptually with the finding that daily hassles and alcohol use were
largely unrelated (and, at best, weakly related) in this study (see discussion of Hypothesis 1). These findings seem to indicate that negative life events/circumstances, such as daily hassles and depressive symptomatology, are not motivators for drinking among the religiously-affiliated college students who took part in this study. These findings may also suggest that alcohol use among religiously-affiliated college students serves a social, rather than coping, function.

See Table 6 for an overview of this study’s findings.
Table 6. Summary of Findings

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Summary of Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Increases in DH will be associated with increases in college students’ alcohol use</td>
<td>Partially supported. Academic Alienation correlated to DD, DPD, DPM at $r = .10$ to $r = .13$ level. Romantic problems correlated to DD, DPD at $r = .10$ to $r = .12$ level</td>
</tr>
<tr>
<td>2.1: Increases in PRC will be associated with decreases in college students’ alcohol use</td>
<td>Supported. Statistically significant negative correlations ($r = -.23$ to $-.26$) between PRC and DD, DPD, DPM</td>
</tr>
<tr>
<td>2.2: Increases with NRC will be associated with increases in college students’ alcohol use.</td>
<td>Partially supported. Weak, statistically significant correlation ($r = .11$) found between NRC and DPD</td>
</tr>
<tr>
<td>3: PRC will moderate the relationship between DH and alcohol use</td>
<td>Not supported. Multiple regression analysis found that interaction of stress and PRC was not statistically significant predictor of alcohol use.</td>
</tr>
<tr>
<td>4: Increases in DH will be associated with increases in DS in college students</td>
<td>Supported. Strong, statistically significant correlation ($r = .62$) found between stress and DS.</td>
</tr>
<tr>
<td>5.1: Increases in PRC will be associated with decreases in DS in college students</td>
<td>Not supported. No statistically significant correlation found between PRC and DS</td>
</tr>
<tr>
<td>5.2: Increases in NRC will be associated with increases in DS in college students</td>
<td>Supported. Moderate, statistically significant positive correlation ($r = .46$) found between NRC and DS</td>
</tr>
<tr>
<td>6: PRC will moderate the relationship between DH and DS</td>
<td>Not supported. Multiple regression analysis found that interaction of stress and PRC was not statistically significant in model to predict DS</td>
</tr>
<tr>
<td>7: There will be a “J”or “U-shaped” relationship between DS and alcohol use</td>
<td>Not supported. ANOVA revealed no significant differences in DS score among the various drinking styles, indicating curvilinear relationship not present. No statistically significant correlation between DS scores and alcohol use, indicating linear relationship not present.</td>
</tr>
</tbody>
</table>

$\alpha$ set at $p < .05$ level for all analyses. DD = Drinking Days (in past 30 days); DPD = Drinks Per Drinking day; DPM = Drinks Per Month (DD x DPD); PRC = Positive Religious Coping; NRC = Negative Religious Coping; DS = Depressive Symptomatology; DH = Daily Hassles
Other Findings

In addition to testing the hypotheses reviewed above, analysis of the data collected for this study resulted in two other noteworthy findings.

*Rates of Alcohol Use at a Faith-based Institution*

In a recent national survey, Johnston et al. (2007) found that 65.4% of college students drank alcohol in the 30 days prior to the survey, while 40% reported engaging in heavy drinking (defined as having five or more drinks on a single occasion) in the two weeks prior to the survey. In contrast, this study found that 50.8% of students reported drinking in the past month and that only 7.3% of students stated that they drank an average of five or more drinks per occasion during the 30 days prior to the survey. However, it should be noted that this study measured drinks per drinking day by asking students to report the “usual” number of drinks they consumed on drinking occasions. In contrast, Johnston et al. reported any students who had consumed five or more drinks in one sitting as having participated in “heavy drinking”. This finding of lower rates of alcohol use and heavy drinking among students at religiously-affiliated schools supports previous research which suggests that students at religiously-affiliated institutions use alcohol at lower rates than students at other institutions. (Hopkins, Freier, Babikian, Helm, McBride, Boward, et al., 2004; McBride et al, 1996).

Positive religious coping was found in this study to be a statistically significant predictor of lower rates of alcohol use, although positive religious coping did not moderate the relationship between daily hassles and alcohol use. Rates of positive religious coping were very high in this study. The mean Positive Religious Coping Subscale score for this study was 19.82 ($SD = 4.94$). By comparison, Pargament et al.,
reported a mean Positive Religious Coping Subscale score of 1.30 (SD=.81). These elevated rates of positive religious coping, which were found in this study to be related to reduced rates of alcohol use, may explain the lower rates of alcohol use at religiously-affiliated colleges. Although positive religious coping does not appear to directly affect the relationship between daily hassles and alcohol use, it may be that the positive religious worldview expressed through religious coping practices (Pargament, 1997) is protective against excessive alcohol use. In this study, most students (73.3%) reported some alcohol use in the past year; however 74.4% of the students who reported using alcohol fell into the categories of infrequent, light, or moderate use. Thus, positive religious coping seems to be related to a norm of moderation, rather than excessive use or rigid abstinence.

The findings of lower-than-average rates of alcohol use and higher than average rates of positive religious coping among the students surveyed in this study, along with the statistically significant, negative correlation between positive religious coping and alcohol use, supports previous research which has found that religion and spirituality among college students is protective against alcohol use (Bahr et al., 1998; Bell et al., 1997; CASA, 2001a; CASA 2001b; Engs et al., 1996; Forthun et al., 1999; McBride et al., 1996; Patock-Peckham et al., 1998; Perkins, 1985; Stewart, 2001; Strawser et al., 2004).

*Rates of Depressive Symptomatology*

The high rate of depressive symptomatology among college students in this study was also noteworthy. In this sample, the mean CESD-10 score was 10.96 (SD = 5.17). 55.5% of the students in this study had a score of 10 or higher on the CESD-10.
Andresen et al. (1994) established that a score of “10” or higher on the CESD-10 was indicative of the presence of depressive symptomatology. Andresen et al. state that the CESD-10 is a measure of depressive symptomatology rather than clinical depression, but also note that the CESD-10 performs in a manner which is remarkably similar to the full CES-D instrument, which was validated using clinical diagnostic criteria for depression. Thus, although the findings of the current study should not be interpreted as necessarily indicative of clinical depression, they are cause for concern.

It may be that the timing of data collection in this study contributed to the high rate of depressive symptomatology found among participants. Data were collected for this study during the final two weeks of the spring semester. This is traditionally a time when undergraduate students experience a great deal of stress, as students are finishing their final assignments for their classes and beginning to prepare for their final examinations. Given the strong positive relationship between daily hassles and depressive symptomatology ($r=0.62$) found in this study, it could be that the stress associated with the end of the semester is related to the high rate of depressive symptomatology found among respondents.

Although the rate of depressive symptomatology among college students in this study was high, this finding was not inconsistent with recent research on depressive symptomatology among college students and young adults. For example, the 2007 American College Health Association (ACHA) survey found that 61.5% of college students reported feelings of hopelessness, and 43.2% reported feeling so depressed they had difficulty functioning (ACHA, 2008). Also, Akerstedt (2008) studies 67 young adults aged 18-24 and found a mean CESD-10 score of 10.34. The high rates of
depressive symptomatology found in the current study give further support to the idea that depressive symptomatology is a growing problem among college students.

**Implications for Research, Theory, Policy and Practice**

The current study has implications for research, theory, policy, and practice related to the areas of daily hassles, religious coping, depressive symptomatology and alcohol use in college students. These implications will be discussed in the following sections.

*Research/Theory Implications*

The findings of this study raise questions about the concepts of positive and negative religious coping. In the current study, the relationships between positive and negative religious coping and the dependent variables (alcohol use and depressive symptomatology) were different than might have been expected in light of the research literature. Interestingly, statistically significant, negative correlations ($r = -.23$ to -.26) were found between positive religious coping and alcohol use, but with the exception of a statistically significant, weak positive correlation between negative religious coping and drinks per drinking day, no statistically significant relationship was found between negative religious coping and alcohol use. Similarly, no statistically significant relationship was found between positive religious coping and depressive symptomatology, but negative religious coping was found to have a statistically significant, strong, negative relationship to depressive symptomatology ($r = .46$).

These findings seem to indicate that the need to reexamine current conceptualizations of positive and negative religious coping, which seem to view these concepts as opposite poles of a single concept: religious coping (Pargament, 1997;
Pargament et al., 1998). However, as discussed above, the findings of the current study suggest that positive and negative religious coping relate to variables such as alcohol use and depressive symptomatology in very different ways. Also, the current study found only a weak correlation ($r = .13, p < .01$) between positive and negative religious coping. If the two concepts were opposite poles of a single concept, it would be logical to expect them to have a strong, negative correlation to each other. Also, if positive and negative religious coping were opposite ends of a single concept, it would be logical to expect both concepts to have correlations of similar magnitude, but opposite directionality, to variables such as depressive symptomatology or alcohol use. In light of the current study’s findings that positive and negative religious coping were not strongly related to each other and did not have statistically significant correlations to the same dependent variables, it seems to be a mistake to view positive and negative religious coping as “mirror images” of each other. Further research in this area is necessary in order to clarify the relationship between positive and negative religious coping.

The high rates of negative religious coping found in this study suggest another area for further research and theory-building. The mean negative religious coping score for participants in the current study was 9.85 ($SD = 3.64$). In comparison, Pargament et al. (1998) report a mean negative religious coping score of .43 ($SD = .52$) in their study of college students. Although the rate of positive religious coping in the current study was similarly inflated ($M = 19.82, SD = 4.94$) when compared to the Pargament et al. study ($M = 1.30, SD = .81$), the high rate of negative religious coping in the current study suggests that religiously-affiliated institutions may either attract students with a negative religious worldview or may instill a negative religious worldview in some students. In either case,
this finding suggests the need for further study of the negative effects of religious coping and religion/spirituality in general. Although religion and spirituality have been found to be related to a number of salutary effects, it is important that researchers continue to study the negative effects of these variables. The current study’s finding of a strong, statistically significant correlation between negative religious coping and depressive symptomatology ($r = .46$) highlights the importance of further research on the negative effects of spirituality and religion.

Further research related to the process by which religion and spirituality protect against alcohol use is necessary. Despite the consistent finding that religion and spirituality are related to lower levels of alcohol (and other drug) use and abuse, little is known as to the reasons for this. Although researchers frequently suggest that peer influence explains the protectiveness of spirituality and religiosity as related to substance use (especially in young people), this theoretical formulation is rarely tested in research.

Further research on the high rates of depressive symptomatology in college students is also necessary. Given the consistent finding (replicated in this study) that daily hassles are related to depressive symptomatology (Jung & Khalsa, 1989; Melchior et al., 2007; Sim, 2000), applied research on interventions designed to lower rates of stress and depression in college students seems necessary. Such research seems especially timely in light of recent research which suggests that the levels of depressive symptomatology and stress among college students are rising rapidly (ACHA, 2008; ACHA, 2001; Sax, 1997).
Policy Implications

Alcohol use.

The findings of this study suggest that religiously-affiliated colleges have lower rates of alcohol use and heavy drinking than their non-sectarian counterparts. In light of these findings, policy makers may want to explore the culture of moderate drinking/abstinence which seems to exist on religiously-affiliated campuses and determine if aspects of that culture can be recreated on non-sectarian public and private campuses. While importing religious proscriptions to non-sectarian schools is obviously inappropriate, it may be that there are creative collaborations and approaches which could be developed and facilitated through dialogue between various types of institutions.

The results of this study suggest that there may be a need for religiously-affiliated colleges to develop policies which address the heavier drinking segment of their student populations. Although the findings of the current study suggest that most students at religiously-affiliated institutions drink alcohol in moderation or abstain from alcohol use altogether, 14.4% of the students surveyed were classified as heavy or moderate-heavy drinkers. It seems likely that religiously-affiliated colleges may be unprepared to deal with such students and may need to develop and enact policies which address the unique needs of such students.

Depressive Symptomatology

The rates of depressive symptomatology found in this study point to the need for policy makers to fund research on the causes of, and effective interventions for, depressive symptomatology in college students. Given the consistent finding (replicated in this study) that college student depressive symptomatology and stress are related, it
will be important for policy makers to also explore ways to decrease stress in college students.

**Implications for Practice**

*Alcohol use.*

This study’s finding that positive religious coping is related to a decrease in alcohol use suggests that positive religious coping may be a significant resource for the treatment and prevention of alcohol abuse in college students; in light of this, it is important that social work practitioners develop competence in performing spiritual/religious assessments in order to identify client resources such as positive religious coping. A number of researchers (Canda & Furman, 1999; Derezotes, 2006; Hodge, 2005) underscore the importance of spiritual/religious assessment in understanding the resources and environmental context of the client. Spiritual/religious assessments allow practitioners to gain an understanding of the roles that spirituality and religion play in the lives of their clients and to determine, along with the client, whether spirituality and religion should be incorporated into the helping process (Hodge). An increasing number of organizations utilize spiritual/religious assessments as a routine procedure; for example, all facilities licensed by the Joint Commission (formerly the Joint Commission on Accreditation of Healthcare Organizations) are currently required to perform a brief spiritual assessment upon patient admission (2004).

*Depressive Symptomatology*

The high rates of depressive symptomatology found among students in this study point to a need for practitioners to thoroughly screen for depressive symptomatology when working with college students. The strong, statistically significant correlation (\( r = \))
between daily hassles and depressive symptomatology found in the current study suggests that practitioners should be especially careful to screen students who report high levels of stress for depressive symptomatology. Also, given the link between depressive symptomatology and suicide, it is important for practitioners to monitor college-age clients for suicidal ideation and gestures and to develop appropriate procedures and action plans to deal with such issues.

**Strengths and Limitations**

This study has a number of strengths. The study explored alcohol use and depressive symptomatology among students at a faith-based college, an under-researched population (Hopkins et al., 2004). The study also examined the relationship between religious coping and alcohol use, an area which has been the focus of little previous research. The study appears to have been the first to examine the differential effects of positive vs. negative religious coping on college student alcohol use and one of only a few studies to examine this topic with any population. Other strengths of the study include the size of its sample (N = 423), the use of standardized measures, and the comparability of the sample to the general characteristics of the student body at the religiously-affiliated college which was the site of the study.

This study also has a number of limitations. The decision to sample only students from one university is a limitation of the study, as the results of the study may not be generalizable to other college student populations. The data collection strategy for the study may also be a limitation. Data were only collected from students who were attending class late in the semester. This data collection strategy may have led to underestimating the number of students who engaged in heavier alcohol use, as such
students may be less likely to attend class on any given day. The decision to collect data in a classroom, as opposed to a more private setting, may have also led to under-reporting of alcohol use due to social desirability concerns on the part of the students who participated in the study. The descriptive, cross-sectional design of this study is a limitation, as such a design does not allow researchers to establish the order in which variables such as daily hassles, religious coping, and alcohol use occurred.

Conclusion

This study examined daily hassles, religious coping, depressive symptomatology, and alcohol use in a sample of students from a religiously-affiliated college. A conceptual model in which religious coping moderated the relationship between daily hassles and alcohol use and the relationship between stress and depressive symptomatology was tested. Although the results of the study did not support the hypothesis of a moderating effect for religious coping, they did show that positive religious coping was negatively related to alcohol use, while negative religious coping was related to higher rates of depressive symptomatology. Further research as to the causal process which explains the protectiveness of religiosity and spirituality in regard to problems such as depressive symptomatology and alcohol is necessary.
Appendix A

Instrument
INFORMED CONSENT DOCUMENT
Stress, Religious Coping, and Alcohol Use Study

You are being asked to participate in a research study about stress, religious coping and alcohol use among college students. Researchers at Case Western Reserve University are conducting this study. You were selected as a possible participant by virtue of your status as an undergraduate student at Malone College. Please read this form and ask any questions that you may have before agreeing to be in the study.

Background Information
The purpose of this research is to better understand stress, religious coping, and alcohol use among college students.

Procedures
If you agree to be a participant in this research, we will ask you to do the following things:

- Complete the attached survey, wherein we will ask you to give us some general background information about yourself, such as your year in school and your age. The survey will also ask you to rate your levels of stress, degree of involvement with various coping activities, and consumption of alcohol.
- We estimate that the survey will take approximately 15 minutes to complete.
- Once you have completed the survey, please seal the survey in the attached envelope and place the envelope in the box at the front of the room.

Risks and Benefits to Being in the Study
This research involves little or no risk to you. Some of the questions on the survey ask about behaviors which may violate Malone College rules. However, the researchers will not disclose any individual information from this study to the Malone College administration, faculty, or staff. In fact, because we have asked you not to put your name or any other identifying information on this survey, no one will ever be able to know how you have responded to the survey questions. Only aggregate information will be reported in any published or unpublished research reports, including those presented to Malone College faculty, staff, administration, and students. All surveys will be kept in a locked file drawer and will only be handled by researchers and trained staff. The surveys will be destroyed at the end of this project.

There is also a slight risk that some of the questions on the survey will make you uncomfortable. However, these questions have all been used in previous studies and no adverse effects have been reported.

There are no direct benefits to you for completion of this survey. However, your participation will be very helpful in assisting the faculty, staff, and administration of Malone College and other colleges/universities to better understand the nature of college student life and to develop alcohol abuse prevention and treatment programs.
Compensation
You will receive a small food item in return for completing this survey.

Confidentiality
The records of this research will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a participant. Research records will be kept in a locked file, and access will be limited to the researchers, the University review board responsible for protecting human participants, and regulatory agencies.

PLEASE DO NOT PUT YOUR NAME ON THIS SURVEY! This will ensure that your involvement in this study is completely anonymous. Also, please do not write any identifying information (such as your e-mail address, dorm room #, the name of this class, or your mailbox #) on this survey.

Voluntary Nature of the Study
Your participation is voluntary. If you choose not to participate, it will not affect your current or future relations with Case Western Reserve University, Malone College, this class, or any Malone College faculty or staff members. There is no penalty or loss of benefits for not participating or for discontinuing your participation. Your decision to participate or not participate in this study will not affect your grade or class standing, nor will early withdrawal from the study. It is o.k. to skip a question on this survey.

After it is completed, you will be able to access the results of this study by going to the Co-Investigator’s Malone College website: www.malone.edu/kstoltzfus. This website will have a link to the results of the study once it is completed and published.

Contacts and Questions
The researchers conducting this study are Dr. Kathleen Farkas and Kenneth Stoltzfus. If you have any questions, concerns or complaints about the study, you may contact the researchers at:

- Dr. Kathleen Farkas, kathleen.farkas@case.edu, (216) 368-2276
- Kenneth Stoltzfus, kms71@case.edu, (330) 471-8206

If the researchers cannot be reached, or if you would like to talk to someone other than the researcher(s) about; (1) questions, concerns or complaints regarding this study, (2) research participant rights, (3) research-related injuries, or (4) other human subjects issues, please contact Case Western Reserve University's Institutional Review Board at (216) 368-6925 or write: Case Western Reserve University; Institutional Review Board; 10900 Euclid Ave.; Cleveland, OH 44106-7230.

What To Do If You Think That You Might Have a Problem with Alcohol or Other Drugs
This survey will ask you about your alcohol use patterns. If you think that you might have a problem with alcohol or other drugs, we encourage you to contact the Malone
College Counseling Center to request assistance. To schedule an appointment, please contact: Tim Morber, Counseling Center Director, at (330) 471-8439 or Assistant Director Jo Glover at (330) 471-8279. Common signs of a potential drug or alcohol problem include: needing to use an increasing amount of a drug (or alcohol) to achieve the feeling you desire, feeling sick when you do not have a drug or drink, using/drinking more than you intended to or for a longer period of time, using/drinking despite problems related to using/drinking, spending a lot of time thinking about, using, or recovering from alcohol or other drugs, giving up important activities to use drugs or drink alcohol, and unsuccessful attempts to control your drinking or drug use.

**Statement of Consent**
By completing the attached survey, I certify that I am 18 years of age or older, that I have read and understand the information discussed above, and that I am voluntarily completing the survey. I understand that by completing the survey, I am voluntarily consenting to be involved in the Stress, Religious Coping, and Alcohol Use Study.

**IF YOU ARE NOT AT LEAST 18 YEARS OLD, DO NOT COMPLETE THIS SURVEY!!!**

Please remove this coversheet and save it in case you would like to contact the researchers with questions or comments at a later time.
Please write the number which corresponds to the answer which best describes you in the space provided.

1. Gender: __________
   1-Male
   2-Female

2. Class Standing: __________
   1-Freshmen
   2-Sophomore
   3-Junior
   4-Senior

3. Race/Ethnicity: __________ (Please enter the number of the race or ethnicity with which you primarily identify.)
   1-Caucasian
   2-African American
   3-American Indian/Alaskan Native
   4-Asian or Pacific Islander
   5-Hispanic/Latino
   6-Mixed racial descent
   7-Other: ______________________________________

4. Age (in years): _______________________________________
Following is a list of experiences which many students have some time or other. Please indicate for each experience how much it has been a part of your life over the past month. Put a “1” in the space provided next to an experience if it was not at all part of your life over the past month (e.g., “trouble with mother in law - 1”); “2” for an experience which was only slightly part of your life over that time; “3” for an experience which was distinctly part of your life; and “4” for an experience which was very much part of your life over the past month.

Intensity of Experience over Past Month

1 = not at all part of my life
2 = only slightly part of my life
3 = distinctly part of my life
4 = very much part of my life

5. Conflicts with boyfriend's/girlfriend's/spouse's family
6. Being let down or disappointed by friends
7. Conflict with professor(s)
8. Social rejection
9. Too many things to do at once
10. Being taken for granted
11. Financial conflicts with family members
12. Having your trust betrayed by a friend
13. Separation from people you care about
14. Having your contributions overlooked
15. Struggling to meet your own academic standards
16. Being taken advantage of
17. Not enough leisure time
18. Struggling to meet the academic standards of others
Intensity of Experience over Past Month

1 = not at all part of my life
2 = only slightly part of my life
3 = distinctly part of my life
4 = very much part of my life

19. A lot of responsibilities
20. Dissatisfaction with school
21. Decisions about intimate relationship(s)
22. Not enough time to meet your obligations
23. Dissatisfaction with your mathematical ability
24. Important decisions about your future career
25. Financial burdens
26. Dissatisfaction with your reading ability
27. Important decisions about your education
28. Loneliness
29. Lower grades than you hoped for
30. Conflict with teaching assistant(s)
31. Not enough time for sleep
32. Conflicts with your family
33. Heavy demands from extra-curricular activities
34. Finding courses too demanding
35. Conflicts with friends
36. Hard effort to get ahead
37. Poor health of a friend
38. Disliking your studies
39. Getting “ripped off” or cheated in the purchase of services.
Intensity of Experience over Past Month
   1 = **not at all** part of my life
   2 = **only slightly** part of my life
   3 = **distinctly** part of my life
   4 = **very much** part of my life

40. Social conflicts over smoking
41. Difficulties with transportation
42. Disliking fellow student(s)
43. Conflicts with boyfriend/girlfriend/spouse
44. Dissatisfaction with your ability at written expression
45. Interruptions of your school work
46. Social isolation
47. Long waits to get service (e.g., at banks, stores, etc.)
48. Being ignored
49. Dissatisfaction with your physical appearance
50. Finding course(s) uninteresting
51. Gossip concerning someone you care about
52. Failing to get expected job
53. Dissatisfaction with your athletic skills
The following items deal with ways you coped with a negative event in your life. There are many ways to try to deal with problems. These items ask what you did to cope with this negative event. Obviously different people deal with things in different ways, but we are interested in how you tried to deal with it. Each item says something about a particular way of coping. We want to know to what extent you did what the item says. How much or how frequently. Don’t answer on the basis of what worked or not – just whether or not you did it. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can. Circle the answer that best applies to you.

1 – not at all
2 – somewhat
3 – quite a bit
4 – a great deal

54. Looked for a stronger connection with God……………….. 1 2 3 4
55. Sought God’s love and care………………………………… 1 2 3 4
56. Sought help from God in letting go of my anger…………… 1 2 3 4
57. Tried to put my plans into action together with God……….. 1 2 3 4
58. Tried to see how God might be trying to strengthen me in this situation………………………………………. 1 2 3 4
59. Asked forgiveness for my sins………………………………. 1 2 3 4
60. Focused on religion to stop worrying about my problems………………………………………….. 1 2 3 4
61. Wondered whether God had abandoned me………………. 1 2 3 4
62. Felt punished by God for my lack of devotion…………….. 1 2 3 4
63. Wondered what I did for God to punish me………………… 1 2 3 4
64. Questioned God’s love for me…………………………….. 1 2 3 4
65. Wondered whether my church had abandoned me…………. 1 2 3 4
66. Decided the devil made this happen………………………. 1 2 3 4
67. Questioned the power of God……………………………… 1 2 3 4
Now we are going to ask about your use of alcohol. Please answer the following questions as honestly as you can. Remember, there are no right or wrong answers and your responses will be completely confidential.

68. In the space provided, please record the number of days in which you have had an alcoholic drink during the past 30 days.

69. In the space provided, please record the usual number of alcoholic drinks you had on days when you drank alcohol during the past 30 days.

Next, we would like to ask about your drinking patterns. Circle the answer that best applies to you.

70. Let's take beer first. How often, on the average, do you usually have a beer? (If you do not drink beer at all go to question 72.)

   1. every day
   2. at least once a week but not every day
   3. at least once a month but less than once a week
   4. more than once a year but less than once a month
   5. once a year or less

71. When you drink beer, how much, on the average, do you usually drink at any one time?

   1. more than one six pack (6 or more cans or tavern glasses)
   2. 5 or 6 cans of beer or tavern glasses
   3. 3 or 4 cans of beer or tavern glasses
   4. 1 or 2 cans of beer or tavern glasses
   5. less than 1 can of beer or tavern glass

72. Now let's look at table wine. How often do you usually have wine? (If you do not drink wine at all go to question 74.)

   1. every day
   2. at least once a week but not every day
   3. at least once a month but less than once a week
   4. more than once a year but less than once a month
   5. once a year or less
73. When you drink wine, how much, on the average, do you usually drink at any one time?

1. over 6 wine glasses
2. 5 or 6 wine glasses
3. 3 or 4 wine glasses
4. 1 or 2 wine glasses
5. less than 1 glass of wine

74. Next we would like to ask you about liquors and spirits (whiskey, gin, vodka, mixed drinks, etc.). How often do you usually have a drink of liquor? (If you do not drink liquor at all, skip questions 74 and 75.)

1. every day
2. at least once a week but not every day
3. at least once a month but less than once a week
4. more than once a year but less than once a month
5. once a year or less

75. When you drink liquor, how many drinks, on the average, do you usually drink at any one time?

1. over 6 drinks
2. 5 or 6 drinks
3. 3 or 4 drinks
4. 1 or 2 drinks
5. less than 1 drink
In general, how would you rate your parents’ alcohol use during the time you were growing up? (Circle the answer which best applies to each parent.)

76. Mother’s alcohol use

1. every day
2. at least once a week but not every day
3. at least once a month but less than once a week
4. more than once a year but less than once a month
5. once a year or less

77. Father’s alcohol use

1. every day
2. at least once a week but not every day
3. at least once a month but less than once a week
4. more than once a year but less than once a month
5. once a year or less

78. What is your church’s (or place of worship’s) stance on alcohol use? (Circle the best answer.)

1. My church/place of worship forbids alcohol use.
2. My church/place of worship discourages, but does not forbid, alcohol use.
3. My church/place of worship allows alcohol use.
4. I do not know my church/place of worship’s stance on alcohol use.
5. I do not attend a church or place of worship.
Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the **past week**: (circle **one** number on each line)

<table>
<thead>
<tr>
<th>During the past week…</th>
<th>Rarely or none of the time (less than 1 day)</th>
<th>Some or a little of the time (1-2 days)</th>
<th>Occasionally or a moderate amount of time (3-4 days)</th>
<th>All of the time (5-7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>79. I was bothered by things that usually don’t bother me..........................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>80. I had trouble keeping my mind on what I was doing............................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>81. I felt depressed.......................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>82. I felt that everything I did was an effort..................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>83. I felt hopeful about the future...............</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>84. I felt fearful............................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>85. My sleep was restless.............................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>86. I was happy............................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>87. I felt lonely.............................................</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>88. I could not “get going”...............</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**THANK YOU FOR COMPLETING THIS SURVEY.**

Please seal the survey in the blank envelope and place it in the collection box at the front of the room.
Appendix B

Study Recruitment Materials
Original E-mail Message to Course Instructors

Dear Colleagues,

I am writing to request your assistance with my dissertation research on stress, religious coping, and alcohol use among college students. I am hoping to collect my data by surveying as many classes which meet during the 1-2:15 PM time slot on Tuesday/Thursday as possible. In light of this, I am e-mailing all instructors who teach at 1-2:15 on T/H (or during a time which overlaps the 1-2:15 class period) to request approximately 20 minutes at the beginning or end of class in which to administer a short survey to your students. Student participation will be voluntary and all responses will be completely anonymous. This project has been approved by the Case Western Reserve University and Malone College IRB’s, as well as by Dr. Patty Long, IVPAA. The survey will be administered by me or by a trained student worker.

If you are willing to give 20 minutes of class time for this project, please reply to this e-mail, (1) place an "X" next to the date which works best for you, and (2) indicate what time we should come to administer the survey:

(1)

________ April 8th
________ April 10th
________ April 15th
________ April 17th
________ April 22nd

(2) WHAT TIME SHOULD WE COME TO ADMINISTER THE SURVEY? (We will need 20 minutes.) ________________

Thank you for considering this request. I really appreciate your help with my dissertation research.

Sincerely,

Ken Stoltzfus
Dear __________,

I am following up on last week’s e-mail to see if you can help with my dissertation research by allowing me to administer a survey on stress, religious coping, and alcohol use to your 1 PM class on Tuesday/Thursday. The survey would be administered by a trained student worker or by me and can be administered at the beginning or end of class. The whole process should take less than 20 minutes.

If you are open to having this survey administered to your class, but don’t feel like you can give up 20 minutes this late in the semester, perhaps I could come during the last 5-10 minutes of class and ask students if they are willing to stay after class to complete the survey. I am using candy bars as an incentive, so some students may take me up on this.

Thanks for considering this request. If you are willing to have this survey administered to your class, please indicate (1) the date on which we can administer the survey and (2) the time at which we should come to administer the survey.

1) __________ April 10th
   __________ April 15th
   __________ April 17th
   __________ April 22\textsuperscript{nd}

(2) WHAT TIME SHOULD WE COME TO ADMINISTER THE SURVEY? __________

Thanks again.

Ken
Appendix C

Survey Administration Script
Stress, Religious Coping, and Alcohol Use Survey Administration Script

Hello. My name is ______________________. I am here today to distribute a survey to you. This survey is part of a study of Stress, Religious Coping, and Alcohol Use among Malone College students. This study is being conducted by Ken Stoltzfus (a Malone College social work professor) as part of his dissertation research.

Your participation in this survey is completely voluntary. All information will be kept confidential. Please do not write your name anywhere on the survey.

After you complete the survey, please seal it in the attached envelope and put it in the box at the front of the room. Even if you choose not to complete the survey, please follow the same procedure: seal the blank survey in the attached envelope and put it in the box at the front of the room. Whether you complete the survey or not, you may select a piece of candy from the box at the front of the room.

If you are under 18 years old, please do not complete this survey. Just seal the blank survey in the envelope provided and place it in the box at the front of the room. You may also take a piece of candy from the box at the front of the room.

Please remove the coversheet from the survey and keep it for your records. If you have questions or comments on the survey, you may contact Ken Stoltzfus or his dissertation advisor, Dr. Kathy Farkas. Their contact information is listed on the removable cover sheet.

Thank you for your willingness to consider participating in this study. You may now begin the survey.


time.” *Journal of Adolescent Research, 21*(6), 579-606.


