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THE ROLE OF RELIGION IN THE RELATIONSHIP BETWEEN LONELINESS AND  
HEALTH BEHAVIORS

A thesis  
presented in fulfillment  
for the degree of Master of Arts  
in the Department of Psychology  
The University of Mississippi

by

LINDSY MAGEE

May 2014

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## ABSTRACT

While research has demonstrated the relationship of religion to health risk and health promoting behaviors, it has not investigated the relationship between religious coping and health risk and health promoting behaviors. In addition, while the link between loneliness and certain health risk and health promoting behaviors has been established, little research has looked at the potential effect that religion has on the relationship between loneliness, health risk, and health promoting behaviors. As such, it was the purpose of this study to investigate the relationship between religious coping and health risk and health promoting behaviors and to investigate the role of religion in the relationship between loneliness and health risk and health promoting behaviors.

This study examined the survey responses of 138 undergraduate students and found that while loneliness was a significant predictor of health promoting behavior, suicide behavior, and lack of exercise behavior in males, loneliness was not a significant predictor of overall health risk behavior. As hypothesized, strength of religious faith significantly predicted health promoting behavior and was associated with less engagement in health risk behavior. However, positive and negative religious coping were not predictive of health risk behavior, but positive religious coping did predict engagement in health promoting behavior. Interestingly, negative religious coping was associated with more loneliness. No significant differences in health risk

behavior were found between lonely individuals who were high in faith vs. low in faith or between lonely individuals who used various types of religious coping. Results should be interpreted with caution as power was limited due to small sample sizes.

## DEDICATION

This thesis is dedicated to my mom, Laurie Magee, my sister, Holly Magee, and my grandparents, George and Lola Magee. Without their continual encouragement and cheerleading over the last several years, there is no doubt this would not have been possible.

## LIST OF ABBREVIATIONS AND SYMBOLS

ANOVA	Analysis of Variance
BMI	Body Mass Index
CDC	Centers for Disease Control and Prevention
HIV	Human Immunodeficiency Virus
MVA	Missing Values Analysis
NCHRBS	National College Health Risk Behavior Survey
SCSORF	Santa Clara Strength of Religious Faith Questionnaire

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## I. LONELINESS

Humans have an innate need to belong, regardless of their age or culture. Indeed, failure to belong can result in negative, unpleasant feelings, including loneliness (Heinrich & Gullone, 2006). Perlman and Peplau (1984) describe loneliness as “a painful warning signal that a person’s social relations are deficient in some way” (14). While loneliness usually stems from a deficiency in the quantity or quality of a person’s relationships, it is the subjective perception of this deficiency that constitutes the experience of loneliness (Andersson, 1998; Booth, 1983; Jones, Freeman, & Goswick, 1981; Heinrich & Gullone, 2006; McWhirter, 1990; Peplau & Perlman, 1982; Perlman & Peplau, 1984).

To be human is to know loneliness, and almost everyone has experienced it at one time or another (Booth, 1983). There are several types of loneliness described in the literature. For example, transient loneliness comes briefly and then goes away, causing only momentary distress. Situational loneliness often occurs after life transitions, such as a move to a new town, a divorce, or the loss of a loved one. Chronic or long-term loneliness, the most troubling type, persists and does not remit, leading to feelings of hopelessness and maladaptive behaviors (Jones, Freeman & Goswick, 1981; McWhirter, 1990; Perlman & Peplau, 1984). Indeed, loneliness researchers emphasize the importance of preventing transient or situational loneliness

from becoming chronic, highlighting the negative consequences of depression, increased suicide risk, and diminished well being. (Perlman & Peplau, 1984).

**Characteristics of the lonely.** While loneliness can be precipitated by external events, predisposing factors within a person likely interact with outside events to create loneliness (Perlman & Peplau, 1984). Lonely people tend to have characteristic thoughts, feelings, and behaviors (Horowitz, French, & Anderson, 1982) and often think that they are unloved, inferior, isolated, and separated from other people. They may feel depressed, angry or paranoid, avoid people, and isolate themselves (Horowitz, French, & Anderson). Characteristics such as shyness, lack of social skills, low self-esteem, self-consciousness, introversion, failure to self-disclose, and a lack of assertiveness have also been linked to loneliness, and people with these characteristics may be more prone to experiencing it (Perlman & Peplau, 1984).

**Demographics of loneliness.** Surveys in various countries around the world estimate that up to one quarter of the world's population is chronically lonely (Andersson, 1998). A number of factors, such as marital status, gender, education level, and income have been shown to significantly predict loneliness (Page & Cole, 1991a). Of these factors, marital status is the most significant predictor, with unmarried participants reporting more loneliness than married ones. In general, women reported more loneliness than men, participants with less than a high school education were lonelier than those who had graduated from college, and the lower the participant's income, the lonelier they were. While age was not a significant predictor, it approached significance; late adolescents and young adults reported more loneliness than elderly adults, the demographic often assumed to be the loneliest (Page & Cole, 1991a). Several studies corroborate these findings, indicating that late adolescents and young adults have the highest risk for loneliness (Cutrona, 1982; Perlman & Peplau, 1984).

While Page and Cole (1991a) found that women endorsed more loneliness than men, studies using the UCLA Loneliness Scale do not usually find gender differences (Perlman & Peplau, 1984). More specifically, when gender differences are found, it is typically in studies that directly ask participants about their loneliness. Women, therefore, may not be lonelier than men, it may just be more socially acceptable for them to admit to loneliness (Perlman & Peplau).

**Loneliness in college students.** Moving from high school to college is one of the biggest transitions in a young person's life, and college freshmen tend to rate the college transition as the most difficult transition in their lives so far (Shaver, Furman, & Buhrmester, 1985). Many first year college students are living away from their family and close friends for the first time, and no matter how successful or popular they were in high school, they have to start over by building a new reputation and new relationships (Cutrona, 1982). Understandably, this results in many college freshman feeling lonely, especially during the initial transition of the fall semester. In general, self-reported loneliness tends to be highest in the fall, decreasing as the year progresses (Shaver, Furman, & Buhrmester).

Tracking loneliness scores of college freshmen demonstrates the impact of loneliness during the transition to college. For example, at week two, over 75% of freshmen reported at least occasional loneliness, and over 40% reported moderate to severe loneliness. At each subsequent time point, students' loneliness scores dropped significantly, and seven months after the start of college, only 25% of freshmen reported any loneliness (Cutrona, 1982). For some students, however, this loneliness persists in to subsequent years of college (Jones, Freemon, & Goswick, 1981).

There are several factors that influenced whether students remained lonely throughout their freshmen year. Students' ratings of their friendships with peers were the best predictor of

whether or not they would remain lonely by the end of the year (Cutrona, 1982). The quality of students' relationships, however, was a better predictor of loneliness than the absolute number of relationships they reported. Those who were no longer lonely reported more satisfaction with friendships than those who remained lonely, supporting the idea that reduction in loneliness comes not just from making new friends, but also by increasing the depth and intimacy of those friendships as the year went on (Cutrona, 1982).

During this transition stage of late adolescence, parental relationships become less important, and forming relationships with peers takes priority over forming new romantic relationships. Even if students did report an improvement in their relationships with family upon coming to college, this improvement did not have a significant impact on whether or not they were lonely (Shaver, Furman, & Buster, 1985).

Students' reasons for their initial loneliness also differed between those who remained lonely and those who did not (Cutrona, 1982). Freshmen who remained lonely tended to blame their loneliness on personal characteristics, such as not being good at making friends, instead of on situational factors like transitioning to a new place. In contrast, freshmen who did not remain lonely tended to blame their loneliness on a combination of both situational and personal factors (Cutrona). To the freshmen who remained lonely, therefore, loneliness seemed like an unchangeable situation from the beginning, not likely to improve.

Other factors, such as social skills and the type of loneliness reported, also helped to predict whether students remained lonely. For example, students' ability to initiate new relationships was the most important predictor of both their loneliness in the fall and their satisfaction with their social network in the fall (Shaver, Furman, & Buster, 1985).

Unfortunately, freshmen who measured low on social skills in the fall were likely to measure low

on them in the spring as well. Freshmen who reported state loneliness, or loneliness that is situational, reported less and less of it as the year progressed. In contrast, freshmen who reported trait loneliness, or loneliness that is a part of their personality, tended to remain trait lonely throughout the year (Shaver, Furman, & Buster, 1985). In general, it seems that most college freshmen overcome their initial loneliness by forming new friendships and social networks, while freshmen who experience persistent loneliness probably come into college already feeling lonely (Shaver, Furman, & Buster, 1985).



## II. HEALTH RISK BEHAVIORS

**Health risk behaviors in college students.** Health risk behaviors represent some of the leading causes of morbidity and mortality in the college population, and the Centers for Disease Control and Prevention (CDC) groups them into six categories: unintentional and intentional injury, tobacco use, alcohol and drug use, unsafe sexual behaviors, unsafe dietary practices, and physical inactivity (CDC, 1995). Most health risk research has focused on one or two of these behaviors at a time, but in 1995, the Centers for Disease Control and Prevention (CDC) administered “the first national survey to measure health risk behaviors among college students in all six areas” (CDC, 1995, p. 2). The National College Health Risk Behavior Survey (NCHRBS) was administered to a nationally representative sample of 4,838 college students in the form of a self-report survey. Results included the prevalence of these behaviors along with information about gender and race/ethnicity differences.

**Prevalence.** Participants were asked to report the frequency of specific behaviors over the past month. Results showed that 34% of the sample reported drinking five or more alcoholic beverages on one occasion, and almost 27% reported drinking alcohol and driving. Thirty one point one percent reported having smoked cigarettes at some point in their lives, and 16.5% were frequent smokers. Eighty six point one percent of students had had sex in their lifetime, while

34.5% reported having had six or more sexual partners. Seventy nine point eight percent used some form of contraception when they had sex, and 13.1% of women had been forced to have sex against their will. Ten point three percent of college students reported having had thoughts of committing suicide, while 1.5% reported unsuccessfully attempting it. According to BMI charts, 20.5% of students were overweight, and 4.3% had taken diet pills in the last thirty days in order to lose weight.

***Demographic differences.*** In general, males were more likely to engage in health risk behaviors than females, such as drinking and driving, carrying a weapon, getting into physical fights, frequently using alcohol, having more than six sexual partners, and eating foods high in fat. However, females were more likely to be forced to have sex against their will, report not using condoms during their last sexual encounter, and to report using unsafe dietary practices to lose weight. White students were more likely than African American or Hispanic students to frequently and heavily use alcohol and to use marijuana. They were also more likely than African American students to report failing to use a condom during last sexual intercourse and to report inconsistent condom use. African American students were more likely than White or Hispanic students to have had sex, to have had more than six sexual partners, to be overweight, and to eat foods high in fat. African American students were also more likely than White students to have attempted suicide. Hispanic students were more likely than White students to report not using some form of contraception during their last sexual intercourse and more likely than African American students to report not using a condom during their last sexual intercourse.

**Loneliness and health risk behaviors.** Research has linked loneliness to engaging in fewer health promoting behaviors and more health risk behaviors (Cacioppo, Hawkley, & Bernston, 2003; Hawkley et al., 2003; Lauder et al., 2006). There are several reason why

loneliness may lead to less healthy behavior. According to social control theory, people within social groups encourage one another to engage in positive health practices while discouraging harmful ones (Hawkley, Thisted, & Cacioppo, 2009). Because they are not very socially connected and supported, lonely people may receive less encouragement from family and friends to engage in health promoting behavior like exercise and healthy eating (Cacioppo, Hawkley, & Bernston, 2003).

Other researchers have proposed that loneliness leads to impaired self-regulation, with self-regulation being defined as “the capacity for altering...behavior so as to conform to externally (socially) defined standards” (Baumeister et al., 2005, p. 589). Multiple studies have demonstrated that participants who are led to believe that they will be alone in the future are significantly less likely to self-regulate and pick healthy options (Baumeister et al., 2005; Twenge, Catanese & Baumeister, 2002).

Studies have directly examined the link between loneliness and positive health practices, such as exercise, nutrition, and safety. While both lack of social support and loneliness have a negative relationship with positive health practices, loneliness accounts for the significance of the relationship between social support and positive health practices (Mahone, Yarcheski, & Yarcheski, 1998). Furthermore, loneliness is a greater predictor of positive health practices than age, gender, marital status, income, self-esteem, and depression (Yarcheski et al., 2004). In general, the more lonely someone is, the less likely they are to engage in positive health practices.

Links have been found between loneliness and specific health risk behaviors. For example, lonely individuals engage in more recreational drug use, consume more alcohol, and are more likely to smoke cigarettes than non-lonely individuals (Bonin, McCreary, & Sadava,

2000; Cacioppo et al., 2002; Cacioppo, Hawkly, & Bernston, 2003; Lauder et al., 2006; Page & Cole, 1991b; Page, 1990). Looking at alcohol use, Page & Cole (1991b) reported that in every other age group besides late adolescence (18-20 years), lonely males drank the most.

Interestingly, lonely late adolescent females not only had a higher alcoholism risk than males of the same age, they also had the highest alcoholism risk of all people in all age groups. However, as lonely females got older, this alcohol risk decreased. This supports the emerging finding that late adolescent females are more likely to use alcohol as a coping strategy for loneliness than their older females counterparts (Page & Cole). While men may engage in the most problem drinking behavior, lonely young women are the most likely to drink to intoxication (Bonin, McCreary, & Sadava, 2000).

Loneliness also increases the risk for other health risk behaviors such as suicide and unhealthy eating behaviors. Specifically, loneliness is a risk factor for suicide ideation and suicide attempts, and more lonely individuals die from suicide than non-lonely individuals (Cacioppo, Hawkley, & Bernston, 2003; Weber, Metha, & Nelsen, 1997). Lonely people are also more likely to have a higher BMI than non-lonely people, and obese females are significantly lonelier than non-obese females (Lauder et al., 2006; Schumaker et al., 1985). The lonelier girls are, the more likely they are to binge eat, use diuretics, and purge after eating; the lonelier boys are, the less likely they are to engage in aerobic exercise. This suggests that loneliness places adolescents at risk for a variety of health risk behaviors (Page, 1990).

### III. RELIGION

**Religious coping.** As many as 95% of Americans say they believe in God, and up to half report participating in religious activities (Plante & Boccaccini, 1997). Despite the prevalence of religion, psychologists have historically disagreed on whether it is a source of help or harm to those who possess it (Koenig & Larson, 2001). This disagreement necessitates an empirical study of religion, taking into account its complexity as well as its benefits and costs (Pargament, 2002).

It is important to understand not only the religiousness of individuals, but also how they use religion in their life (Pargament, 2002). Particularly, it is important to understand how people use religion to cope with life stressors, as religious coping has been demonstrated to be a better predictor of adjustment than overall religiousness (Pargament, Koenig, & Perez, 2000). There are two types of religious coping: positive and negative (Pargament et al., 1998). Positive religious coping is described as “an expression of a sense of spirituality, a secure relationship with God, a belief that there is a meaning to be found in life, and a sense of spiritual connectedness with others” (712). In contrast, negative religious coping is defined as “an expression of a less secure relationship with God, a tenuous and ominous view of the world, and a religious struggle in the search for significance” (712).

When dealing with life stressors, people use positive religious coping more frequently than they use negative religious coping (Pargament, Koenig, & Perez, 2000). Research on religious coping has consistently shown that people who use positive religious coping report less psychological distress and more psychological and spiritual growth following a life stressor. On the other hand, research has also consistently shown that people who use negative religious coping have poorer functioning (Pargament et al., 1998). Use of negative religious coping following a stressor has been associated with a wide variety of negative outcomes such as emotional distress, anxiety, depression, posttraumatic symptoms, negative affect, pain, psychosomatic symptoms, and poor health (Pargament, Feuille, & Burdzy, 2011). In the words of Pargament (2002), “the fruit of religion can be bitter and sweet” (178).

**Religion and health risk behaviors.** Research has revealed a relationship between religion and both the prevention of health risk behaviors and the promotion of health behaviors. Pointing out that the majority of America’s teenagers endorse belief in God, Wallace & Forman (1998) asked the question, “Are religiously oriented young people less likely than other youth to participate in behaviors that compromise their health and more likely than other youth to engage in health-promoting behaviors?” (730). Results confirmed that religious high school seniors were significantly less likely to engage in health risk behaviors and significantly more likely to engage in health promoting behaviors (Wallace & Forman).

Religious youth are significantly less likely to engage in wide variety of health risk behaviors such as getting into fights, using weapons, binge drinking, drinking and driving, riding with people who are drinking, using cigarettes, using marijuana, having sexual intercourse, and suicide ideation and attempts (Donahue, 1995; Koenig & Larson, 2001; Wallace & Forman, 1998). Particularly, they are half as likely to engage in substance abuse or violent behavior

(Donahue, 1995). Even more notable, “after gender, religiousness is the second strongest inhibitor of both suicide ideation and attempts” (Donahue, p. 155). At the same time, religious youth are significantly more likely to report healthy eating habits, regular exercise, and getting a healthy amount of sleep (Wallace & Forman). Therefore, religion makes it both less likely that individuals will engage in self-destructive behaviors and more likely they will engage in health enhancing behaviors (Koenig & Larson, 2001).

#### IV. GOALS OF THE PRESENT STUDY

As mentioned, adolescents and young adults are at especially high risk for loneliness. In particular, the transition to college can result in many students feeling lonely, with some experiencing loneliness that persists throughout their college years. Health risk behaviors are also prominent in the college population, representing the leading causes of morbidity and mortality for this demographic group. A relationship between loneliness and certain health risk behaviors has been established in the literature, with loneliness increasing the likelihood that individuals will engage in health risk behaviors and decreasing the likelihood they will engage in health promoting behaviors. In contrast, religion has been found to have the opposite effect, both decreasing the likelihood that individuals will engage in health risk behaviors and increasing the likelihood they will engage in health promoting behaviors. However, it is important to understand not only whether a person is religious, but also how he uses religion in his life, otherwise known as religious coping (Pargament, 2002). While research has demonstrated the relationship of religion to health risk and health promoting behaviors, it has not investigated the relationship between religious coping and health risk and health promoting behaviors.

It was the purpose of this study, therefore, to investigate the relationship between religious coping and health risk and health promoting behaviors. Also, while the link between



loneliness and certain health risk and health promoting behaviors has been established, little research has looked at the potential effect that religion has on the relationship between loneliness and health risk and health promoting behaviors. As such, it was also the purpose of this study to investigate the role of religion in the relationship between loneliness and health risk and health promoting behaviors. The hypotheses of this study were:

- 1) Loneliness will be positively associated with health risk behaviors and negatively associated with health promoting behaviors.
- 2) Religious faith will be negatively associated with health risk behaviors and positively associated with health promoting behaviors.
- 3) Lonely individuals who report being more religious will be less likely to engage in health risk behaviors than lonely individuals who report being less religious.
- 4) Positive religious coping will be negatively associated with health risk behaviors and positively associated with health promoting behaviors.
- 5) Negative religious coping will be positively associated with health risk behaviors and negatively associated with health promoting behaviors.
- 6) Lonely individuals who report using positive religious coping will have the lowest engagement in health risk behaviors when compared to lonely individuals who report using negative religious coping, both types of religious coping, or no religious coping.
- 7) Lonely individuals who report using negative religious coping will have the highest engagement in health risk behaviors when compared to lonely individuals who report using positive religious coping.

## V. METHODS

### **Participants**

Participants were 191 undergraduate students 18 years of age and older enrolled in Psychology courses at the University of Mississippi. They were recruited through classroom announcements and received course extra credit for study participation. Only 138 participants showed indication of fully attentive responding by giving correct answers on instructed response items (e.g., “Pick four if you are paying attention”). The remaining 53 were excluded from the analysis.

Women represented 56.9% of the sample ( $n=78$  females, 59 males). The median age was 20 and the mean age was 20.3 ( $SD=2.21$ ; range 18 to 32). The majority of participants were Caucasian (69%), 24% were African American, 3% were Hispanic, 2% were Native American, 2% were Asian, and 1% were multiracial.

The majority of the participants were first year college students (58%), 20% were sophomores, 9% were juniors, 9% were seniors, 3% were beyond their senior year in college, and 1% were graduate students. Non-Greek affiliation was 64% while Greek affiliation was 36%. Socioeconomic status was assessed by number of bedrooms in participants' home of origin. Number of bedrooms ranged from 2 to 12, with 3% living in 2 bedroom homes, 26.3%

living in 3 bedroom homes, 37.2% living in 4 bedroom homes, 23.4% living in 5 bedroom homes, 6% living in 6 bedroom homes, 3% living in 7 bedroom homes, and 1% living in 12 bedroom homes.

The majority of participants responded that their religious background was Protestant Christian (85%), while 11% responded Catholic and 4% responded either Atheist or no religious background. When asked about how often they participated in religious activities, 20% of participants said they participated daily, 20% said 2-3 times per week, 20% said once per week, 11% said 2-3 times per month, 11% said once per month, 11% said less than once per month, and 7% said they never participated in religious activity.

### **Instruments**

A demographic survey was used to assess participants' sex, age, racial/ethnic background, marital status, religious background, religious participation, year of college, grade point average, socioeconomic status, type of residence, employment, and campus involvement (see Appendix A).

The National College Health Risk Behavior Survey (NCHRBS; CDC, 1995) is a self-report questionnaire that measures the leading health risk behaviors in US college undergraduates (see Appendix B). Participants were asked to indicate the frequency of their involvement in a variety of health risk and health promoting behaviors. For this survey, participants were given a composite health risk score based on their endorsement of 39 different health risk behaviors. If they endorsed engaging in a behavior at any frequency, they were assigned a score of "1" for that behavior, and if they did not endorse engaging in the behavior, they were assigned a score of "0." Participants were also given a composite health promoting

score based on endorsement of 10 different health promoting behaviors. The health promoting score was calculated by adding up the frequency endorsed for each of the ten items.

The Revised UCLA Loneliness Scale – Version 3 (Russell & Cutrona, 1988; Russell et al., 1980; Russell, 1996) is a 20 item self-report measure of loneliness that assesses feelings of social isolation and being alone (see Appendix C). Items are measured on a four-point scale from “never” to “always,” indicating how frequently participants experience the feelings described in each item. Ratings on each item are added to obtain a total score, with a higher total score representing greater levels of loneliness. Russell (1982) reported Chronbach’s alpha reliabilities ranging between .89 and .94 and test-retest reliability of .73 over a 2-month period.

The Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante & Boccaccini, 1997) is a 10-item self-report measure assessing strength of religious faith, regardless of religious denomination (see Appendix D). Items are rated on a four-point scale from “strongly disagree to “strongly agree,” indicating the level of agreement with each statement. Higher scores represent greater self-reported strength of religious faith. Plante et al. (1999) reported Chronbach’s alpha reliabilities between .94 and .95 split-half reliability coefficients between 0.90 and 0.96. The SCSORF was found to be related to other measures of religion and unrelated to measures of self-righteousness, depression, and the desire to be with other people (Plante et. al, 1999).

The Brief RCOPE (Pargament et al. 1999) is a 14-item self-report measure of religious coping with life stressors (see Appendix E). It is the most commonly used measure of religious coping (Pargament, Feuille & Burdzy, 2011). It consists of two subscales, positive and negative religious coping. Positive religious coping items measure “a secure relationship with a transcendent force, a sense of spiritual connectedness with others, and a benevolent world view,”

while negative religious coping items measure “underlying spiritual tensions and struggles within oneself, with others, and with the divine” (Pargament, Feuille, & Burdzy, 2011, pg. 51). Participants were asked to list the most recent major problem they have faced and then rate items pertaining to how they coped with the problem. Each item is rated on a four-point scale from “not at all” to “a great deal,” indicating how much the item described the participant’s response to the problem. Internal consistency is slightly higher for the positive religious coping scale, with Chronbach’s alpha for the positive religious coping scale ranging from .67 to .94 and Chronbach’s alpha for the negative religious coping scale ranging from .60 to .90. The positive religious coping scale has been related to measures of psychological and spiritual well-being while the negative religious coping scale has been related to measures of psychological distress (Pargament, Feuille, & Burdzy, 2011).

## **Procedure**

Participants were recruited through classroom announcements and received course extra credit for participation. Students signed up through SONA, the online research participation scheduling system, for a day and time to participate in the study. Students came to a reserved computer lab at their designated day and time, and received instructions on how to complete the surveys. The surveys were broken up into four different links and included: informed consent, a demographic survey, The National College Health Risk Behavior Survey, The Revised UCLA Loneliness Scale – Version 3, The Santa Clara Strength of Religious Faith Questionnaire, and The Brief RCOPE. During the summer semesters, students who expressed interest in participating in the study received an email outlining instructions on how to take the study and containing the four survey links. Due to the sensitive nature of some of the survey questions, all students were given a counseling referral list following their completion of the surveys.

## VI. RESULTS

### **Data Preparation**

**Missing Data.** Missing Values Analysis (MVA) on SPSS found that no variables were missing more than 5% of responses.

Cases were excluded if they were missing data required for a specific analysis. Eight cases were missing Positive RCOPE items; eight cases were missing Negative RCOPE items; three cases were missing SCSRF items; one case was missing the suicide attempt item; one case was missing the injury from suicide attempt item; seven cases were missing the smoking items; two cases were missing the alcohol use items; five cases were missing the cocaine use items; four cases were missing the steroid use items; three cases were missing the sex with females items; three cases were missing the sex with males items; two cases were missing the condom use items; one case was missing the alcohol and sex item; one case was missing the rape item; three cases were missing the HIV item; one case was missing the description of weight item; one case was missing the exercise to lose weight item; one case was missing the vomit/laxative item; one case was missing the diet pill use item; two cases were missing height and weight to calculate the BMI item; and one case was missing the participation in a physical education class item.

**Univariate and Multivariate outliers.** SPSS EXPLORE was used to identify variables with scores in excess of 3.29 ( $p < .001$ , two-tailed test). There were no outliers for strength of religious faith, positive religious coping, total health risk, or total health promoting behavior. There were three outliers in negative religious coping (i.e., 20, 21, 22); one outlier in loneliness as assessed by the UCLA scale (i.e., 77); four outliers for age (i.e., age 27 and older); and one outlier in socioeconomic status as assessed by number of bedrooms growing up (i.e., 12). Outliers were altered to values one unit above or below the most extreme neighboring value as described by Tabachnick and Fidell (2007). In regressions, multivariate outliers, defined by Mahalanobis as distances from the centroid greater than critical chi-square values ( $p < .001$ ), were not included in the analyses.

**Normality and transformations.** Variables of interest were analyzed for skew and kurtosis after outliers had been removed. The numbers reported here are ratios. The skewness ratio for loneliness (from the UCLA Loneliness scale) was 1.44 with a kurtosis ratio of -1.3. The skewness ratio for Total Health Risk Behaviors was 2.35 with a kurtosis ratio of -1.17. The skewness ratio for Total Health Promoting Behaviors was 2.14 with kurtosis ratio of -1.68. The skewness ratio for Religious Strength was -4.78 with a kurtosis ratio of 2.53, showing a negative skew. A reflect and logarithm transformation improved them to -2.69 and -1.79 respectively, which was acceptable, so transformed data were used for regression analyses. The skewness ratio of Positive Religious Coping was -3.28 with a kurtosis ratio of -.77, showing a negative skew. A reflect and logarithm transformation improved them to -2.04 and -1.8, which was acceptable, so transformed data were used for regression analyses. The skewness ratio for Negative Religious Coping was 7.79 with a kurtosis ratio of 5.23, showing a positive skew. Inverse transformation

improved them to -3.16 and -1.69 respectively, which was still unacceptable, so untransformed data were used for regression analyses.

**Reliability of scales and response characteristics.** Reliability was assessed after removal of inattentive responders but prior to removal of outliers. The UCLA loneliness scale was calculated by the summation of 20 items, 10 of which were reverse scored. Possible scores range from 20 to 80. The mean score was 38.40 (SD=10.44) and median was 38.00. Data from 137 participants showed a reliability coefficient of  $\alpha=.93$ . The Santa Clara Strength of Religious Faith Scale was calculated by the summation of 10 items, with possible scores ranging from 10 to 40. The mean score was 31.95 (SD=6.912) and median was 33.00. Data from 134 participants showed a reliability coefficient of  $\alpha=.96$ . The positive religious coping subscale from the RCOPE was calculated by the summation of 7 items, with possible scores ranging from 7 to 28. The mean score was 20.66 (SD=6.057) and median was 21.00. Data from 135 participants showed a reliability coefficient of  $\alpha=.94$ . The negative religious coping subscale from the RCOPE was calculated by the summation of 7 items, with possible scores ranging from 7 to 28. The mean score was 9.44 (SD=3.23) and median was 8.00. Data from 135 participants showed a reliability coefficient of  $\alpha=.81$ . Total health risk behavior was calculated by the summation of 38 items, with possible scores ranging from 0 to 38. The mean score of 135 participants was 12.85 (SD=4.46) and median was 12. Total health promoting behavior was calculated by the summation of 10 items, with total scores ranging from 0 to 44. The mean score of 134 participants was 23.56 (SD=9.135) and median was 22.00.

**Group differences.**



**Sex.** An independent samples t-test was run with sex as the grouping variable and loneliness, strength of religious faith, positive religious coping, negative religious coping, total health risk behavior, and total health promoting behavior as the outcome variables. There were no significant sex differences found for any of these variables.

**Age.** Standard correlations were performed between age and the outcome variables. Age was found to have a small positive correlation with positive religious coping, such that older age associated with more positive religious coping ( $r = .185; p = .035$ ).

**Race/ethnicity.** An independent samples t-test was run with race/ethnicity as the grouping variable. Due to the fact that most of the minority participants were African American, race/ethnicity was divided into two groups: Caucasian and minority. The t-test revealed significant differences based on race/ethnicity for loneliness, with minorities reporting significantly more loneliness ( $M=42.03; SD=9.69$ ) than Caucasians ( $M=37.23; SD=10.02; t(128) = 2.51, p = .01$ , two-tailed) and marginally significantly more positive religious coping ( $M=23.38; SD=5.351$ ) than Caucasians ( $M=19.96; SD=6.219; t(128) = 2.17, p = .06$ , two-tailed).

**Socioeconomic status.** Standard correlations were performed between the number of bedrooms in a participant's childhood home (as a proxy for socioeconomic status) and the outcome variables. Socioeconomic status had a small negative correlation with loneliness, such that higher socioeconomic status was associated with less loneliness ( $r = -.211, p = .016$ ). Socioeconomic status had a small positive correlation with health risk behavior, such that higher socioeconomic status was associated with engaging in more health risk behaviors ( $r = .237, p = .016$ ).

**Greek affiliation.** An independent samples t-test was run with greek affiliation as the grouping variable. The t-test revealed that greek students reported significantly less loneliness ( $M=34.65, SD=8.84$ ) than non-greek students ( $M=40.96, SD=10.15; t(128) = -3.59, p < .001$ , two-tailed)

and significantly more strength of religious faith ( $M=33.54$ ,  $SD=5.65$ ) than non-greek students ( $M=31.06$ ,  $SD=7.47$ ;  $t(128) = 2$ ,  $p = .05$ , two-tailed). Negative religious coping was marginally significant, with greek students reporting less negative religious coping ( $M=8.83$ ,  $SD=2.29$ ) than non-greek students ( $M=9.83$ ,  $SD=3.46$ );  $t(125.98) = -1.97$ ,  $p = .051$ , two-tailed).

### **Correlations between variables.**

Relationships between several variables were investigated using Pearson product-moment correlation coefficients and can be seen in Table 1. Cases with missing data were excluded.

Loneliness had a medium negative correlation with health promoting behavior  $r = -.41$ ,  $n = 130$ ,  $p = .000$ , such that greater loneliness was associated with less health promoting behavior. Loneliness also had a small positive correlation with negative religious coping  $r = .204$ ,  $n = 130$ ,  $p = .020$ , such that greater loneliness was associated with more negative religious coping. Health Risk Behavior had a small negative relationship with strength of religious faith  $r = -.179$ ,  $n = 130$ ,  $p = .042$ , such that more health risk behavior associated with less strength of religious faith. Health promoting behavior had a small positive relationship with strength of religious faith  $r = .28$ ,  $n = 130$ ,  $p = .001$ , such that more health promoting behavior was associated with greater strength of religious faith. Strength of religious faith had a strong positive correlation,  $r = .797$ ,  $n = 130$ ,  $p = .000$ , with positive religious coping, such that greater strength of religious faith was associated with more positive religious coping.

**Table 1***Pearson Product-moment Correlations*

<b>Variables</b>	1	2	3	4	5	6
1. Loneliness	-	-.164	<b>-.408**</b>	-.11	-.07	<b>.204*</b>
2. Health Risk Behavior		-	-.028	<b>-.179*</b>	-.108	.125
3. Health Promoting Behavior			-	<b>.277**</b>	.165	-.13
4. Strength of Religious Faith				-	<b>.797**</b>	-.007
5. Positive Religious Coping					-	.155
6. Negative Religious Coping						-

\*  $p < .05$  (2-tailed) \*\*  $p < .01$  (2-tailed)**Predicting Health Risk Behavior**

Hierarchical multiple regressions were run to assess the ability of loneliness, strength of religious faith, positive religious coping, and negative religious coping to predict engagement in health risk behavior. Cases with missing data were excluded and transformed variables were used to address violations of normality. In all cases, multivariate outliers (using Mahalanobis distances from the centroid greater than critical chi-square values ( $p < .001$ )) were not included in the analyses. Results are presented in Appendix F.

**Loneliness.** The ability of loneliness to predict health risk behavior after controlling for the influence of ethnicity, socioeconomic status, and greek affiliation was assessed using a hierarchical multiple regression. Ethnicity, socioeconomic status, and greek affiliation were entered at Step 1, explaining 5.5% of the variance in health risk behavior,  $R$  squared change =

.055,  $F$  change (3, 129) = 2.5,  $p$  = .063. After entry of loneliness at Step 2, the total variance explained by the model as a whole was 7.1%,  $F$  (4, 128) = 2.45,  $p$  = .05. Addition of loneliness to the equation did not significantly improve  $R^2$ , suggesting that loneliness adds no further prediction to health risk behavior. In the final model, only socioeconomic status was significant ( $\beta$  = .2,  $p$  = .025). Since ethnicity and greek affiliation were not found to be significant in the final model, another hierarchical regression was run excluding them. Socioeconomic status was entered in Step 1, explaining 4.7% of the variance in health risk behavior,  $R$  squared change = .047,  $F$  change (1, 132) = 6.47,  $p$  = .012. After entry of loneliness at Step 2, the total variance explained by the model as a whole was 6.3%,  $F$  (2, 131) = 4.41,  $p$  = .133. Addition of loneliness to the equation did not significantly improve  $R^2$ , again suggesting that loneliness adds no further prediction to health risk behavior. In the final model, only socioeconomic status was significant ( $\beta$  = .187,  $p$  = .033). (Table 1)

***Loneliness and Specific Health Risk Behaviors.*** The ability of loneliness to predict specific health risk behaviors after controlling for the influence of ethnicity, socioeconomic status, and greek affiliation was assessed using hierarchical multiple regressions.

***Suicide.*** The variable suicide was comprised of items measuring the frequency of suicidal ideation, suicidal plans, and suicide attempts in the past year. Socioeconomic status, ethnicity, and greek affiliation were entered in Step 1, explaining 7.6% of the variance in suicide behavior  $R$  squared change = .076,  $F$  change (3, 130) = 3.58,  $p$  = .016. After entry of loneliness at Step 2, the total variance explained by the model as a whole was 18.4%,  $F$  (4, 129) = 7.29,  $p$  = .000. Addition of loneliness explained an additional 10.8% of the variance in suicide behavior,  $R$  squared change = .108,  $F$  change (1, 129) = 17.09,  $p$  = .000. In the final model, loneliness and

socioeconomic status were significant, with loneliness recording a higher beta value ( $beta = -.35$ ,  $p = .000$ ) than socioeconomic status ( $beta = -.17$ ,  $p = .041$ ). (Table 2)

*Drug Use.* The variable drug use was comprised of items measuring lifetime and previous thirty-day use of marijuana, cocaine, inhalants, steroids, injected drugs, and other illegal drugs.

Socioeconomic status, ethnicity, and greek affiliation were entered in Step 1, explaining 2.7% of the variance in drug use,  $R$  squared change = .027,  $F$  change (3, 127) = 1.17,  $p = .325$ . After entry of loneliness at Step 2, the total variance explained by the model as a whole was 2.8%,  $F$  (4, 126) = .91,  $p = .460$ , indicating it was not significant. Addition of loneliness to the equation did not significantly improve  $R^2$ , suggesting that loneliness adds no further prediction to drug use. In the final model, none of the variables were significant. (Table 3)

*Alcohol Use.* The variable alcohol use was comprised of items measuring drinking behaviors in the last thirty days such as frequency of alcohol consumption, binge drinking, and drinking and driving. Socioeconomic status, ethnicity, and greek affiliation were entered in Step 1, explaining 10.1% of the variance in alcohol use,  $R$  squared change = .101,  $F$  change (3, 130) = 4.86,  $p = .003$ . After entry of loneliness at Step 2, the total variance explained by the model as a whole was 10.1%,  $F$  (4, 129) = .03,  $p = .867$ , indicating it was not significant. Addition of loneliness did not significantly improve  $R^2$ , suggesting it adds no further prediction to alcohol use. In the final model, only socioeconomic status was significant ( $beta = .26$ ,  $p = .003$ ). Since ethnicity and greek affiliation were not found to be significant in the final model, another hierarchical regression was run excluding them. Socioeconomic status was entered in Step 1, explaining 8.2% of the variance in suicide behavior,  $R$  squared change = .082,  $F$  change (1, 132) = 11.28,  $p = .001$ . After entry of loneliness at Step 2, the total variance explained by the model as a whole was 8.3%,  $F$  (2, 131) = 5.94,  $p = .643$ . Again, addition of loneliness did not significantly improve

$R^2$ , suggesting it adds no further prediction to alcohol use. In the final model, only socioeconomic status was significant ( $beta = .28, p = .002$ ). (Table 4)

*BMI.* The variable of BMI was computed by dividing participants' squared height by their weight and multiplying by 705. Socioeconomic status, ethnicity, and greek affiliation were entered in Step 1, explaining 9.8% of the variance in BMI,  $R$  squared change = .098,  $F$  change (3, 129) = 4.65,  $p = .004$ . After entry of loneliness at Step 2, the total variance explained by the model as a whole was 10.1%,  $F$  (4, 128) = 3.59,  $p = .008$ . Addition of loneliness to the equation did not significantly improve  $R^2$ , suggesting that loneliness adds no unique prediction to BMI. In the final model, only socioeconomic status ( $beta = -.21, p = .020$ ) and ethnicity ( $beta = -.23, p = .013$ ) were significant. Since greek affiliation was not found to be significant in the final model, another hierarchical regression excluding it was run. Socioeconomic status and ethnicity was entered in Step 1, explaining 9.6% of the variance in suicide behavior,  $R$  squared change = .096,  $F$  change (2, 130) = 6.92,  $p = .001$ . After entry of loneliness at Step 2, the total variance explained by the model as a whole was 10%,  $F$  (3, 129) = 4.8,  $p = .003$ . Again, addition of loneliness did not significantly improve  $R^2$ , suggesting it adds no further prediction to alcohol use. In the final model, both socioeconomic status ( $beta = -.21, p = .016$ ) and ethnicity ( $beta = -.22, p = .011$ ) were significant. (Table 5)

*Unhealthy Eating Practices in Females.* The variable of unhealthy eating practices was comprised of items measuring frequency of laxative and vomiting following eating and use of diet pills in the last thirty days. Socioeconomic status, ethnicity, and greek affiliation were entered in Step 1, explaining 3.5% of the variance in unhealthy eating practices in females  $R$  squared change = .035,  $F$  change (3, 98) = 1.17,

$p = .325$ . After entry of loneliness at Step 2, the total variance explained by the model as a whole was 5.1%,  $F(4, 97) = 1.32, p = .270$ , indicating it was not significant. Addition of loneliness to the equation did not significantly improve  $R^2$ , suggesting that loneliness adds no further prediction to unhealthy eating practices in females. In the final model none of the variables were significant. (Table 6)

*Lack of Exercise in Males.* The variable exercise in males was comprised of items measuring frequency of participation in aerobic exercise, stretching exercises, strength-training exercises, and walking and bicycling in the last week, as well as enrollment in physical education classes and participation in sports teams for the school year. Socioeconomic status, ethnicity, and greek affiliation were entered in Step 1, explaining 2.5% of the variance in exercise,  $R$  squared change = .025,  $F$  change (3, 81) = .691,  $p = .560$ . After entry of loneliness at Step 2, the total variance explained by the model as a whole was 7.7%,  $F(4, 80) = 1.67, p = .164$ . Addition of loneliness explained an additional 5.2% of the variance in exercise behavior,  $R$  squared change = .052,  $F$  change (1, 80) = 4.53,  $p = .036$ . In the final model only loneliness was significant ( $beta = -.25, p = .036$ ). (Table 7)

**Strength of Religious Faith.** The ability of strength of religious faith to predict health risk behavior after controlling for the influence of ethnicity, socioeconomic status, and greek affiliation was first assessed using a hierarchical multiple regression with untransformed variables. Ethnicity, socioeconomic status, and greek affiliation were entered at Step 1, explaining 5.3% of the variance in health risk behavior,  $R$  squared change = .053,  $F$  change (3, 127) = 2.37,  $p = .074$ . After entry of strength of religious faith at Step 2, the total variance explained by the model as a whole was 9%,  $F(4, 126) = 3.12, p = .017$ . Addition of strength of religious faith explained an additional 3.7% of the variance in health risk behavior,  $R$  squared

change = .037,  $F$  change (1, 126) = 5.15,  $p$  = .025. In the final model, socioeconomic status and strength of religious faith were statistically significant, with socioeconomic status ( $beta$  = .23,  $p$  = .009) recording a slightly higher beta value than strength of religious faith ( $beta$  = -.2,  $p$  = .025). Since socioeconomic status was the only demographic variable found to be significant in the final model, another hierarchical regression was run excluding non-significant demographic variables. Socioeconomic status was entered at Step 1, explaining 4.7% of the variance in health risk behavior,  $R$  squared change = .047,  $F$  change (1, 130) = 6.38,  $p$  = .013. After entry of strength of religious faith at Step 2, the total variance explained by the model as a whole was 7.2%,  $F$  (2, 129) = 5.01,  $p$  = .008. Addition of strength of religious faith to the equation did not significantly improve  $R^2$ , suggesting that strength of religious faith adds no further prediction to health risk behaviors. In the final model only socioeconomic status ( $beta$  = .21,  $p$  = .015) was significant. (Table 8)

In order to determine if normality had an influence, the ability of the reflected log of strength of religious faith to predict health risk behavior after controlling for the influence of demographic variables was also assessed using a hierarchical multiple regression. Ethnicity, socioeconomic status, and greek affiliation were entered at Step 1, explaining 5.4% of the variance in health risk behavior,  $R$  squared change = .054,  $F$  change (3, 122) = 2.3,  $p$  = .080. After entry of the reflected log of strength of religious faith at Step 2, the total variance explained by the model as a whole was 13.4%,  $F$  (4, 121) = 4.69,  $p$  = .001. Addition of the reflected log of strength of religious faith explained an additional 8.1% of the variance in health risk behavior,  $R$  squared change = .081,  $F$  change (1, 121) = 11.26,  $p$  = .001. In the final model, ethnicity, socioeconomic status and the reflected log of religious faith were statistically significant, with the reflected log of religious faith recording a slightly higher beta value ( $beta$  = .30,  $p$  = .001)



than ethnicity ( $beta = -.185, p = .046$ ) or socioeconomic status ( $beta = .24, p = .006$ ). Since greek affiliation was not found to be significant in the final model, another hierarchical regression was run excluding this variable. Ethnicity and socioeconomic status, were entered at Step 1, explaining 4.8% of the variance in health risk behavior,  $R$  squared change = .048,  $F$  change (2, 129) = 3.26,  $p = .041$ . After entry of the reflected log of strength of religious faith at Step 2, the total variance explained by the model as a whole was 9.6%,  $F$  (3, 128) = 4.55,  $p = .005$ . Addition of the reflected log of strength of religious faith explained an additional 4.8% of the variance in health risk behavior,  $R$  squared change = .048,  $F$  change (1, 128) = 6.82,  $p = .010$ . In the final model socioeconomic status ( $beta = .22, p = .010$ ) and the reflected log of strength of religious faith ( $beta = .22, p = .010$ ) were both statistically significant. Since ethnicity was not found to be significant in the final model, another hierarchical regression was run excluding this variable. Socioeconomic status was entered in Step 1, explaining explaining 4.7% of the variance in health risk behavior,  $R$  squared change = .047,  $F$  change (1, 130) = 6.38,  $p = .013$ . After entry of the reflected log of strength of religious faith at Step 2, the total variance explained by the model as a whole was 9.2%,  $F$  (2, 129) = 6.51,  $p = .002$ . Addition of the reflected log of strength of religious faith explained an additional 4.5% of the variance in health risk behavior,  $R$  squared change = .045,  $F$  change (2, 129) = 6.38,  $p = .013$ . In the final model socioeconomic status ( $beta = .21, p = .013$ ) and the reflected log of strength of religious ( $beta = .21, p = .013$ ) faith were again both statistically significant. (Table 9)

**Positive Religious Coping.** The ability of positive religious coping to predict health risk behavior after controlling for the influence of ethnicity, socioeconomic status, and age was assessed using a hierarchical multiple regression. Ethnicity, socioeconomic status, and age were entered at Step 1, explaining 7.1% of the variance in health risk behavior,  $R$  squared change =

.071,  $F$  change (3, 129) = 3.29,  $p$  = .023. After the entry of positive religious coping at Step 2, the total variance explained by the whole model was 6%,  $F$  (4, 128) = 3.09,  $p$  = .018. Addition of positive religious coping did not reliably improve  $R$ , suggesting that positive religious coping adds no further prediction to health risk behavior. In the final model, only socioeconomic status was significant, ( $beta$  = .27,  $p$  = .002). Since socioeconomic status was the only demographic variable found to be significant in the final model, another hierarchical regression was run excluding non-significant demographic variables. Socioeconomic status was entered at Step 1, explaining 4.7% of the variance in health risk behavior,  $R$  squared change = .047,  $F$  change (1, 132) = 6.47,  $p$  = .012. After entry of positive religious coping at Step 2, the total variance explained by the model as a whole was 5.7%,  $F$  (2, 131) = 4,  $p$  = .022. Addition positive religious coping to the equation did not significantly improve  $R^2$ , again suggesting that positive religious coping adds no further prediction to health risk behaviors. In the final model only socioeconomic status ( $beta$  = .21,  $p$  = .013) was significant. (Table 10)

In order to determine if normality had an influence, the ability of the reflected log of positive religious coping to predict health risk behavior after controlling for demographic variables was assessed using a hierarchical multiple regression. Using the transformed variable did not result in different findings, as the reflected log of strength of positive religious coping still did not significantly improve  $R$ , suggesting that it adds no further prediction to health risk behavior. (Table 11)

**Negative Religious Coping.** The ability of negative religious coping to predict health risk behavior after controlling for the influence of ethnicity and socioeconomic status was assessed using a hierarchical multiple regression. Ethnicity and socioeconomic status were entered at Step 1, explaining 5% of the variance in health risk behavior,  $R$  squared change =

.049,  $F$  change (2, 130) = 3.34,  $p$  = .038. After the entry of negative religious coping at Step 2 the total variance explained by the whole model was 6.1%,  $F$  (3, 129) = 2.8,  $p$  = .042. Addition of negative religious coping did not reliably improve  $R^2$ , suggesting that negative religious coping adds no further prediction to health risk behavior. In the final model, only socioeconomic status was significant, ( $beta$  = .22,  $p$  = .011). Since ethnicity was not found to be significant in the final model, another hierarchical regression excluding it was run. Socioeconomic status was entered at Step 1, explaining 4.7% of the variance in health risk behavior,  $R$  squared change = .047,  $F$  change (1, 132) = 6.47,  $p$  = .012. After the entry of negative religious coping at Step 2, the total variance explained by the whole model was 6.1%,  $F$  (2, 131) = 4.3,  $p$  = .016. Addition of negative religious coping did not significantly improve  $R^2$ , suggesting that negative religious coping adds no further prediction to health risk behavior. In the final model, only socioeconomic status was significant, ( $beta$  = .22,  $p$  = .011). (Table 12)

### **Predicting Health Promoting Behavior**

Hierarchical multiple regressions were run to assess the ability of loneliness, strength of religious faith, positive religious coping, and negative religious coping to predict engagement in health promoting behavior. Cases with missing data were excluded and transformed variables were used to address assumptions of normality. In all cases, multivariate outliers (using Mahalaonbis distances from the centroid greater than critical chi-square values ( $p < .001$ )) were not included in the analyses. Results are presented in Appendix F.

**Loneliness.** The ability of loneliness to predict health promoting behavior after controlling for the influence of ethnicity, socioeconomic status, and greek affiliation was assessed using a hierarchical multiple regression. Ethnicity, socioeconomic status, and greek affiliation were entered at Step 1, explaining 4.3% of the variance in health promoting behavior,

$R$  squared change = .053,  $F$  change (3, 129) = 1.91,  $p$  = .131. After entry of loneliness at Step 2, the total variance explained by the model as a whole was 15.4%,  $F$  (4, 128) = 5.82,  $p$  = .000. Addition of loneliness explained an additional 11.1% of the variance in health promoting behavior, after controlling for ethnicity, socioeconomic status, and greek affiliation,  $R$  squared change = .111,  $F$  change (1, 128) = 16.85,  $p$  = .000. In the final model, only loneliness was significant ( $beta$  = -.36,  $p$  = .000). (Table 13)

**Strength of Religious Faith.** The ability of strength of religious faith to predict health promoting behavior after controlling for the influence of ethnicity and greek affiliation was assessed using a hierarchical multiple regression. Ethnicity and greek affiliation were entered at Step 1, explaining 3% of the variance in health promoting behavior,  $R$  squared change = .028,  $F$  change (2, 129) = 1.9,  $p$  = .160. After entry of strength of religious faith at Step 2, the total variance explained by the model as a whole was 10.5%,  $F$  (3, 128) = 5.01,  $p$  = .003. Addition of strength of religious faith explained an additional 7.7% of the variance in health promoting behavior,  $R$  squared change = .077,  $F$  change (1, 128) = 11.01,  $p$  = .001. In the final model, only strength of religious faith was statistically significant ( $beta$  = .29,  $p$  = .001). (Table 14)

In order to determine if normality had an influence, the ability of the reflected log of strength of religious faith to predict health promoting behavior after controlling for the influence of demographic variables was assessed using a hierarchical multiple regression. Using the transformed variable did not result in different findings, as the reflected log of strength of religious faith ( $beta$  = -.303,  $p$  = .001) was also the only statistically significant variable in the final model. (Table 15)

**Positive Religious Coping.** The ability of positive religious coping to predict health promoting behavior after controlling for the influence of ethnicity and age was assessed using a

hierarchical multiple regression. Ethnicity and age were entered at Step 1, explaining 2.5% of the variance in health risk behavior,  $R$  squared change = .025,  $F$  change (2, 130) = 1.7,  $p$  = .188.

After the entry of positive religious coping at Step 2 the total variance explained by the whole model was 6.3%,  $F$  (3, 129) = 2.89,  $p$  = .038. Addition of positive religious coping explained an additional 3.8% of the variance in health promoting behavior,  $R$  squared change = .038,  $F$  change (1, 129) = 5.18,  $p$  = .024. In the final model, positive religious coping and ethnicity were statistically significant, with positive religious coping recording a slightly higher beta value ( $\beta$  = .2,  $p$  = .024) than ethnicity ( $\beta$  = .19,  $p$  = .031). Since age was not found to be significant in the final model, another hierarchical regression excluding it was run. Ethnicity was entered at Step 1, explaining 2.7% of the variance in health promoting behavior,  $R$  squared change = .027,  $F$  change (1, 131) = 3.6,  $p$  = .06. After the entry of positive religious coping at Step 2, the total variance explained by the whole model was 6.4%,  $F$  (2, 130) = 4.41,  $p$  = .014. Addition of positive religious coping explained an additional 3.7% of the variance in health promoting behavior,  $R$  squared change = .037,  $F$  change (1, 130) = 5.12,  $p$  = .025.

In the final model, both ethnicity ( $\beta$  = .20,  $p$  = .024) and positive religious coping ( $\beta$  = .20,  $p$  = .025) were significant. (Table 16)

In order to determine if normality had an influence, the ability of the reflected log of positive religious coping to predict health promoting behavior after controlling demographic variables was also assessed using a hierarchical multiple regression. Ethnicity and age were entered at Step 1, explaining 1.7% of the variance in health promoting behavior,  $R$  squared change = .017,  $F$  change (2, 130) = 1.14,  $p$  = .323. After the entry of transformed positive religious coping at Step 2 the total variance explained by the whole model was 5.6%,  $F$  (3, 129) = 2.53,  $p$  = .06, indicating it was not significant. Addition of transformed positive religious

copied explained an additional 3.8% of the variance in health promoting behavior,  $R$  squared change = .038,  $F$  change (1, 129) = 5.24,  $p$  = .024. In the final model, only transformed positive religious coping was significant ( $\beta$  = -.202,  $p$  = .024). (Table 17)

**Negative Religious Coping.** The ability of negative religious coping to predict health risk behavior after controlling for the influence of ethnicity was assessed using a hierarchical multiple regression. Ethnicity was entered at Step 1, explaining 2.7% of the variance in health promoting behavior,  $R$  squared change = .027,  $F$  change (1, 131) = 3.63,  $p$  = .059. After the entry of negative religious coping at Step 2 the total variance explained by the whole model was 3.6%,  $F$  (2, 130) = 2.45,  $p$  = .09, indicating it was not significant. Addition of negative religious coping did not reliably improve  $R^2$ , suggesting that negative religious coping adds no further prediction to health promoting behavior. In the final model, none of the variables were significant. (Table 18)

### **Health Risk Behavior of Lonely High Faith and Lonely Low Faith Individuals**

A median split procedure was used to divide participants into lonely and non-lonely groups. Participants with a score above 38 on the Revised UCLA Loneliness Scale were considered lonely. Next, another median split procedure was used to divide lonely participants into high faith and low faith groups. Participants with a score of 34 or below on the Santa Clara Strength of Religiousness Scale were considered low faith while participants with scores of 35 or higher were considered high faith. An independent samples t-test was run with health risk behavior as the grouping variable. The t-test revealed no significant differences in health risk behavior for lonely high faith individuals ( $M$  = 11.88,  $SD$  = 4.07) and lonely low faith individuals ( $M$  = 12.16,  $SD$  = 4.74;  $t$  (62) = .252,  $p$  = .802, two-tailed). However, since the group

sizes were small (high faith = 34, low faith = 32) there may not have been sufficient power to detect differences.

### **Health Risk Behavior of Different Types of Lonely Religious Copers**

Lonely participants were divided into four categories based on types of religious coping.

A median split procedure was used to determine positive religious copers, with participants scoring a 22 or higher on the Positive Religious Coping Scale considered positive religious copers. Another median split procedure was used to determine negative religious copers, with participants scoring 10 or higher on the Negative Religious Coping Scale considered negative religious copers. Participants who scored a 22 or above on the Positive Religious Coping Scale and a 10 or above on the Negative Religious Coping Scale were considered as “both.”

Participants who did not score above the cutoffs for either type of coping were considered as “neither.” A one-way between-groups analysis of variance was conducted to determine if there was a difference in health risk behavior between lonely participants who used these various types of religious coping. Results revealed no significant difference in health risk behavior for any of the religious coping groups: Positive ( $M = 12.13, SD = 4.84$ ); Negative ( $M = 11.27, SD = 4.78$ ); Both ( $M = 12.79, SD = 4.95$ ); Neither ( $M = 11.62, SD = 3.37$ ). However, since there were only 66 participants who were both lonely and fit into one of the religious coping groups, group sizes were very small, and there may not have been sufficient power to detect differences.

## VII. DISCUSSION

**Loneliness.** Loneliness was related to several variables. A t-test revealed that minority participants reported significantly more loneliness than Caucasian participants. Participants with lower socioeconomic status reported more loneliness than participants with higher socioeconomic status, which is supported by Page & Cole (1991a). Also supported by previous research (Cacioppo, Hawkley & Bernston, 2003; Hawkley et al., 2003; Lauder et al., 2006), less reported loneliness was associated with more engagement in health promoting behavior. In line with previous research on negative religious coping (Pargament, Feuille, & Burdzy, 2011), more reported loneliness was associated with more negative religious coping. In line with previous research on health behaviors (Page 1990), more reported loneliness was associated with less physical exercise in males. In support of hypothesis, a hierarchical regression revealed that even after controlling for ethnicity, socioeconomic status, and greek affiliation, loneliness still significantly predicted engagement in health promoting behavior. Contrary to hypothesis, no significant relationship between loneliness and health risk behavior was found. However, a hierarchical regression did reveal that a specific health risk behavior, suicide, was significantly predicted by loneliness, even after controlling for socioeconomic status, a finding that is supported by Cacioppo, Hawkley, & Bernston (2003) and Weber, Metha, & Nelsen (1997).



**Strength of Religious Faith.** A t-test revealed that greek affiliated participants reported significantly more strength of religious faith than non-greek affiliated participants. In support of hypothesis and previous research (Donahue, 1995; Koenig & Larson, 2001; Wallace & Forman, 1998), less strength of religious faith was associated with more engagement in health risk behavior while greater strength of religious faith was associated with more engagement in health promoting behavior. More strength of religious faith was also strongly associated with positive religious coping.

Strength of religious faith was negatively skewed in this sample, with participants reporting a high level of strength of religious faith. This was not unexpected given the region of the country (Southern United States); however, to address normality, strength of religious faith was transformed and regressions were run with both the transformed and untransformed variable. Hierarchical regressions revealed that even after controlling for ethnicity and greek affiliation, both strength of religious faith and the reflected log of strength of religious faith significantly predicted engagement in health promoting behavior. The ability of strength of religious faith to predict health risk behavior was less clear. A hierarchical regression using untransformed strength of religious faith revealed that it was not a significant predictor of health risk behavior. In contrast, a hierarchical regression using the reflected log of strength of religious faith revealed that it was a significant predictor of health risk behavior, equal in prediction with socioeconomic status. Given a more normal distribution, strength of religious faith may be a more significant predictor of health risk behavior than it is in the current sample.

Contrary to hypothesis, a t-test revealed no significant difference in the health risk behavior of lonely participants who were more religious vs. lonely participants who were less

religious. However, the sample sizes of these two groups were fairly small, so there may not have been sufficient power to detect group differences.

### **Religious Coping.**

**Positive Religious Coping.** A t-test revealed that minority participants reported more positive religious coping than Caucasian participants and that more positive religious coping was associated with older age. As mentioned above, positive religious coping was associated with greater strength of religious faith.

Positive religious coping was negatively skewed in this sample, with participants reporting a high level of positive religious coping. Again, this was not unexpected, especially since positive religious coping was so strongly correlated with strength of religious faith, which was also negatively skewed. Like with strength of religious faith, positive religious coping was transformed, and regressions were run with both the transformed and untransformed variable. In support of hypothesis, a hierarchical regression revealed that even after controlling for ethnicity, both positive religious coping and the reflected log of positive religious coping still predicted health promoting behavior. Contrary to hypothesis, no significant relationship between positive religious coping and health risk behavior was found.

**Negative Religious Coping.** Negative religious coping was associated with more reported loneliness. This supports research by Pargament, Feuille, & Burdzy (2011), which found that negative religious coping was related to a wide variety of negative outcomes. Overall, participants reported a low level of negative religious coping, resulting in a positive skew. This was not surprising since this sample reported a lot of positive religious coping, and the two scales tend to be orthogonal and related to opposite outcomes (Pargament et al., 2011). To address normality, negative religious coping was transformed, but it remained skewed even after

transformation. Therefore, all regressions were run with the untransformed variable. Contrary to hypotheses, no significant relationship between negative religious coping and health risk behavior or health promoting behavior was found.

Also contrary to hypothesis, an ANOVA revealed no significant difference in health risk behavior between lonely participants who used different types of religious coping (positive, negative, both types, or neither type). However, the sample size of each group was very small, so it is likely that there was not sufficient power to detect group differences.

## VIII. LIMITATIONS AND FUTURE DIRECTIONS

One of the main limitations of this study was the religiousness of the sample (96% reported that they were either Protestant Christian or Catholic and 60% said they participated in at least weekly religious activities). This resulted in significant skew in the religious variables and limits the generalizability of these results to the general population of college students. It was also difficult to adequately investigate the relationship of negative religious coping to other variables since so little of this sample reported engaging in negative religious coping. With less skewed religious variables and a larger sample size, a future study may be better able to investigate how and if religiousness and religious coping influences the health behavior of lonely individuals. Another limitation was the fifty-three participants who were lost due to not fully attending to the survey. It may be important to investigate if there are any significant differences between participants who fully attended to the study questions and participants who did not fully attend. Furthermore, this sample was mainly comprised of Caucasian and African American participants, so future studies could examine and compare the relationship of other minority groups to these variables. For instance, do other minority groups also report more loneliness and positive religious coping than Caucasians? Finally, 78% of participants in this sample were in their first two years of college. Future studies could examine differences in loneliness, religion,

and health behaviors between younger and older college students, especially since this study found that older age was associated with more positive religious coping. Though not all of the expected relationships were found, this study demonstrated that loneliness and religion do influence college students' health behavior, particularly their likelihood to engage in behaviors that will improve and benefit their health. One particularly interesting finding was that more reported loneliness was associated with more negative religious coping. Future studies could further examine the nature of this relationship, looking at whether or not one precipitates the other. It could be especially important to be on the lookout for lonely college students' use of negative religious coping, particularly because it has been linked to distress and a wide variety of negative outcomes (Pargament, Feuille, & Burdzy, 2011).

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## LIST OF APPENDICES

## APPENDIX A: DEMOGRAPHIC QUESTIONS

## Demographic Questions

1. What is your biological sex?

1. Male
2. Female

2. In what year were you born? 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992  
1993 1994 1995 1996 Other: \_\_\_\_\_

3. Which of these best describes your racial/ethnic background?

1. Black/African
2. White/Caucasian
3. Latino/Hispanic
4. Native American
5. Multiracial
6. Asian
7. Other

4. What is your marital status?

1. Single/never married
2. Single/living with romantic partner
3. Married
4. Divorced
5. Widowed
6. Prefer not to say

5. What is your religious background? \_\_\_\_\_

6. How often do you participate in religious activity?

1. Daily
2. 2-3 times a week
3. Once a week
4. 2-3 times a month
5. Once a month
6. Less than once a month
7. Never

7. What is your sexual orientation?

1. rather not say
2. not sure
3. straight/heterosexual
4. LGBT/homosexual

8. What year of college are you in? (circle) 1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup> 4<sup>th</sup> 5<sup>th</sup> Graduate Student

9. What was your Grade Point Average (GPA) before this semester? \_\_\_\_\_

If you took them, what were your scores on these tests for your college application?

- a. ACT scores \_\_\_\_\_
- b. SAT scores \_\_\_\_\_

10. How many bedrooms and bathrooms were in the place you grew up in? \_\_\_\_\_ Bedrooms & \_\_\_\_\_ Bathrooms

11. What is your age? \_\_\_\_\_

12. Are you a:

1. Full-time student
2. Part-time student

13. Are you an in-state, out of state, or an international student?

1. In-state
2. Out of state
3. International

If you answered "Out of state" or International, where do you consider home?

\_\_\_\_\_

14. With whom do you currently live?

1. Alone
2. Spouse/domestic partner
3. Roommate(s)/friend(s)
4. Parent(s)/guardian(s)
5. Other relatives
6. Your children
7. Other



15. Where do you currently live?

1. College dormitory or residence hall
2. Fraternity or sorority house
3. Other university/college housing
4. Off-campus house or apartment
5. Parent/guardian's home
6. Other

16. Are you a member of a Greek organization?

1. Yes
2. No

17. Are you a student athlete?

1. Yes
2. No

18. Circle any of these types of campus organizations that you are a member of (circle as many as you are a member of):

1. Student Government
2. Residence Life
3. Professional Organization (e.g., pre-law, pre-med)
4. Honor Society
5. Religious Organization
6. Intramural/Sports Organization
7. Community Service Organization
8. Performance Organization (e.g., dance, music, theatre)
9. Multicultural/International Organization
10. Other type of organization \_\_\_\_\_

19. How many hours a week do you work for pay?

1. 0 hours
2. 1 to 9 hours
3. 10 to 19 hours
4. 20 to 29 hours
5. 30 to 39 hours
6. 40 hours
7. More than 40 hours

APPENDIX B: NATIONAL COLLEGE HEALTH RISK BEHAVIOR SURVEY

National College Health Risk Behavior Survey (NCHRBS)

*This next set of questions concerns health behaviors.*

During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?

1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or more times

During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?

1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or more times

During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club? Do not count carrying a weapon as part of your job.

1. 0 days
2. 1 day
3. 2 or 3 days
4. 4 or 5 days
5. 6 or more days

During the past 30 days, on how many days did you carry a gun? Do not count carrying a gun as part of your job.

1. 0 days
2. 1 day
3. 2 or 3 days
4. 4 or 5 days
5. 6 or more days

In the past 12 months, how many times were you in a physical fight?

1. 0 times

2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or 7 times
6. 8 or 9 times
7. 10 or 11 times
8. 12 or more times

During the past 12 months, with whom did you fight?

1. A total stranger
2. A friend or someone I know
3. A boyfriend, girlfriend, or date
4. My spouse or domestic partner
5. A parent, brother, sister, or other family member
6. Other \_\_\_\_\_

During the past 12 months, how many times were you in a physical fight in which you were injured and had to be treated by a doctor or nurse?

1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or more times

During the past 12 months, did you ever seriously consider attempting suicide?

1. Yes
2. No

During the past 12 months, did you make a plan about how you would attempt suicide?

1. Yes
2. No

During the past 12 months, how many times did you actually attempt suicide?

1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 or 5 times
5. 6 or more times

If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

1. I did not attempt suicide during the past 12 months
2. Yes
3. No

Have you ever tried cigarette smoking, even one or two puffs?

1. Yes
2. No

How old were you when you smoked a whole cigarette for the first time?

1. I have never smoked a whole cigarette
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

During the past 30 days, on how many days did you smoke cigarettes?

1. 0 days
2. 1 or 2 days
3. 3 to 5 days
4. 6 to 9 days
5. 10 to 19 days
6. 20 to 29 days
7. All 30 days

During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?

1. I did not smoke cigarettes during the past 30 days
2. Less than 1 cigarette per day
3. 1 cigarette per day
4. 2 to 5 cigarettes per day
5. 6 to 10 cigarettes per day
6. 11 to 20 cigarettes per day
7. More than 20 cigarettes per day

Have you ever smoked cigarettes regularly, that is, at least one cigarette every day for 30 days?

1. Yes
2. No

How old were you when you first started smoking cigarettes regularly (at least one cigarette every day for 30 days)?

1. I have never smoked cigarettes regularly
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

Have you ever tried to quit smoking cigarettes?

1. Yes
2. No

During the past 30 days, on how many days did you use chewing tobacco or snuff, such as Redman, Levi Garrett, Beechnut, Skoal, Bandits, or Copenhagen?

1. 0 days
2. 1 or 2 days
3. 3 to 5 days
4. 6 to 9 days
5. 10 to 19 days
6. 20 to 29 days
7. All 30 days

How old were you when you had your first drink of alcohol other than a few sips?

1. I have never had a drink of alcohol other than a few sips
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

During the past 30 days, on how many days did you have at least one drink of alcohol?

1. 0 days
2. 1 or 2 days
3. 3 to 5 days

4. 6 to 9 days
5. 10 to 19 days
6. 20 to 29 days
7. All 30 days

During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

1. 0 days
2. 1 day
3. 2 days
4. 3 to 5 days
5. 6 to 9 days
6. 10 to 19 days
7. 20 or more days

During your life, how many times have you used marijuana?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

How old were you when you tried marijuana for the first time?

1. I have never tried marijuana
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years or older

During the past 30 days, how many times did you use marijuana?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

How old were you when you tried any form of cocaine, including powder, crack, or freebase, for the first time?

1. I have never tried cocaine
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

During the past 30 days, how many times did you use any form of cocaine, including powder, crack, or freebase?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

During your life, how many times have you used the crack or freebase forms of cocaine?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

During your life, how many times have you sniffed glue, or breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?



1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

During your life, how many times have you taken steroid pills or shots without a doctor's prescription?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

During your life, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, or heroin?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 to 99 times
7. 100 or more times

During the past 30 days, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, or heroin?

1. 0 times
2. 1 or 2 times
3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

During the past 30 days, how many times have you used any illegal drug in combination with drinking alcohol?

1. 0 times
2. 1 or 2 times

3. 3 to 9 times
4. 10 to 19 times
5. 20 to 39 times
6. 40 or more times

During your life, how many times have you used a needle to inject any illegal drug into your body?

1. 0 times
2. 1 time
3. 2 or more times

How old were you when you had sexual intercourse for the first time?

1. I have never had sexual intercourse
2. 12 years old or younger
3. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

During your life, with how many females have you had sexual intercourse?

1. I have never had sexual intercourse with a female
2. 1 female
3. 2 females
4. 3 females
5. 4 females
6. 5 females
7. 6 or more females

During the past 3 months, with how many females have you had sexual intercourse?

1. I have never had sexual intercourse with a female
2. I have had sexual intercourse with a female, but not during the past 3 months
4. 2 females
5. 3 females
6. 4 females
7. 5 females
8. 6 or more females

During your life, with how many males have you had sexual intercourse?

1. I have never had sexual intercourse with a male

2. 1 male
3. 2 males
4. 3 males
5. 4 males
6. 5 males
7. 6 or more males

During the past 3 months, with how many males have you had sexual intercourse?

1. I have never had sexual intercourse with a male
2. I have had sexual intercourse with a male, but not during the past 3 months
3. 1 male
4. 2 males
5. 3 males
6. 4 males
7. 5 males
8. 6 or more males

During the past 30 days, how many times did you have sexual intercourse?

1. 0 times
2. 1 time
3. 2 or 3 times
4. 4 to 9 times
5. 10 to 19 times
6. 20 or more times

During the past 30 days, how often did you or your partner use a condom?

1. I have not had sexual intercourse during the past 30 days
2. Never used a condom
3. Rarely used a condom
4. Sometimes used a condom
5. Most of the time used a condom
6. Always used a condom

The last time you had sexual intercourse, did you or your partner use a condom?

1. I have never had sexual intercourse
2. Yes
3. No

Did you drink alcohol or use drugs before you had sexual intercourse the last time?

1. I have never had sexual intercourse

2. Yes
3. No

The last time you had sexual intercourse, what method did you or your partner use to prevent pregnancy?

1. No method was used to prevent pregnancy
2. Birth control pills
3. Condoms
4. Withdrawal
5. Some other method
6. Not sure

How many times have you been pregnant or gotten someone pregnant?

1. 0 times
2. 1 time
3. 2 or more times
4. Not sure

During your life, have you ever been forced to have sexual intercourse against your will?

1. Yes
2. No

How old were you the first time you were forced to have sexual intercourse against your will?

1. Never been forced
2. 4 years old or younger
3. 5 to 12 years old
4. 13 or 14 years old
4. 15 or 16 years old
5. 17 or 18 years old
6. 19 or 20 years old
7. 21 to 24 years old
8. 25 years old or older

How old were you the *last time* you were forced to have sexual intercourse against your will?

1. Never been forced
2. 4 years old or younger
3. 5 to 12 years old
4. 13 or 14 years old
5. 15 or 16 years old
6. 17 or 18 years old
7. 19 or 20 years old

8. 21 to 24 years old
9. 25 years old or older

Have you ever had your blood tested for the AIDS virus/HIV infection?

1. Yes
2. No
3. No Sure

How do you describe your weight?

1. Very underweight
2. Slightly underweight
3. About the right weight
4. Slightly overweight
5. Very overweight

Which of the following are you trying to do about your weight?

1. Lose weight
2. Gain weight
3. Stay the same weight
4. I am not trying to do anything about my weight

During the past 30 days, did you diet to lose weight or to keep from gaining weight?

1. Yes
2. No

During the past 30 days, did you exercise to lose weight or to keep from gaining weight?

1. Yes
2. No

During the past 30 days, did you vomit or take laxatives to lose weight or to keep from gaining weight?

1. Yes
2. No

During the past 30 days, did you take diet pills to lose weight or to keep from gaining weight?

1. Yes
2. No

What is your height? (In inches) \_\_\_\_\_

What is your weight? (In pounds) \_\_\_\_\_

Yesterday, how many times did you eat fruit?

1. 0 times
2. 1 time
3. 2 times
4. 3 or more times

Yesterday, how many times did you drink fruit juice?

1. 0 times
2. 1 time
3. 2 times
4. 3 or more times

Yesterday, how many times did you eat green salad?

1. 0 times
2. 1 time
3. 2 times
4. 3 or more times

Yesterday, how many times did you eat cooked vegetables?

1. 0 times
2. 1 time
3. 2 times
4. 3 or more times

Yesterday, how many times did you eat hamburger, hot dogs, or sausage?

1. 0 times
2. 1 time
3. 2 times
4. 3 or more times 26

Yesterday, how many times did you eat french fries or potato chips?

1. 0 times
2. 1 time
3. 2 times
4. 3 or more times

Yesterday, how many times did you eat cookies, doughnuts, pie, or cake?

1. 0 times
2. 1 time
3. 2 times
4. 3 or more times

On how many of the past 7 days did you exercise or participate in sports activities for at least 20 minutes that made you sweat and breathe hard, such as basketball, jogging, swimming laps, tennis, fast bicycling, or similar aerobic activities?

1. 0 days
2. 1 day
3. 2 days
4. 3 days
5. 4 days
6. 5 days
7. 6 days
8. 7 days

On how many of the past 7 days did you do stretching exercises, such as toe touching, knee bending, or leg stretching?

1. 0 days
2. 1 day
3. 2 days
4. 3 days
5. 4 days
6. 5 days
7. 6 days
8. 7 days

On how many of the past 7 days did you do exercises to strengthen or tone your muscles, such as push-ups, sit-ups, or weight lifting?

1. 0 days
2. 1 day
3. 2 days
4. 3 days
5. 4 days
6. 5 days
7. 6 days
8. 7 days

On how many of the past 7 days did you walk or bicycle for at least 30 minutes at a time? (Include walking or bicycling to or from class or work.)

1. 0 days
2. 1 day
3. 2 days
4. 3 days
5. 4 days
6. 5 days
7. 6 days
8. 7 days

During this school year, have you been enrolled in a physical education class?

1. Yes
2. No

During this school year, on how many college sports teams (intramural or extramural) did you participate?

1. 0 teams
2. 1 team
3. 2 teams
4. 3 or more teams



APPENDIX C: REVISED UCLA LONELINESS SCALE

## Revised UCLA Loneliness Scale

Instructions: The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by circling the number in the space provided.

<b>Statement</b>	<b>Never</b>	<b>Rarely</b>	<b>Sometimes</b>	<b>Often</b>
1. How often do you feel that you are “in tune” with the people around you?	1	2	3	4
2. How often do you feel that you lack companionship?	1	2	3	4
3. How often do you feel that there is no one you can turn to?	1	2	3	4
4. How often do you feel alone?	1	2	3	4
5. How often do you feel a part of a group of friends?	1	2	3	4
6. How often do you feel that have a lot in common with the people around you?	1	2	3	4
7. How often do you feel that you are no longer close to anyone?	1	2	3	4
8. How often do you feel that your interests and ideas are not shared by those around you?	1	2	3	4
9. How often do you feel outgoing and friendly?	1	2	3	4
10. How often do you feel close to people?	1	2	3	4
11. How often do you feel left out?	1	2	3	4
12. How often do you feel that your relationships with others are not meaningful?	1	2	3	4
13. How often do you feel that no one really knows you well?	1	2	3	4
14. How often do you feel isolated from others?	1	2	3	4
15. How often do you feel you can find companionship when you want it?	1	2	3	4
16. How often do you feel that there are people who really understand you?	1	2	3	4
17. How often do you feel shy?	1	2	3	4
18. How often do you feel that people are around you but not with you?	1	2	3	4
19. How often do you feel that there are people you can talk to?	1	2	3	4
20. How often do you feel that there are people you can turn to?	1	2	3	4

APPENDIX D: SANTA CLARA STRENGTH OF RELIGIOUSNESS SCALE

Santa Clara Strength of Religious Faith Questionnaire (SCSORF)

Instructions: This next set of questions concerns faith. Please rate the degree to which these statements apply to you.

	<b>Strongly Disagree</b>			<b>Strongly Agree</b>
My religious faith is extremely important to me.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
I pray daily.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
I look to my faith as a source of inspiration.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
I look to my faith as providing meaning and purpose in my life.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
I consider myself active in my faith and church.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
My faith is an important part of who I am as a person.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
My relationship with God is extremely important to me.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
I enjoy being around others who share my faith.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
I look to my faith as a source of comfort.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
My faith impacts many of my decisions.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

## APPENDIX E: THE BRIEF RCOPE

The Brief RCOPE

What is the most recent major problem you have faced?

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Instructions: Please rate the degree to which these statements describe your response to the problem you listed above.

	<b>Not At All</b>	<b>Somewhat</b>	<b>Quite A Bit</b>	<b>A Great Deal</b>
Looked for a stronger connection with God.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Sought God's love and care.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Sought help from God in letting go of my anger.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Tried to put my plans into action together with God.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Tried to see how God might be trying to strengthen me in this situation.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Asked forgiveness for my sins.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Focused on religion to stop worrying about my problems.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Wondered whether God had abandoned me.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Felt punished by God for my lack of devotion.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Wondered what I did for God to punish me.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Questioned God's love for me.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>

Wondered whether my church had abandoned me.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Decided the devil made this happen.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
Questioned the power of God.	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>

## APPENDIX F: TABLES



Table 2. Hierarchical Regression of Loneliness Predicting Health Risk Behavior after controlling for SES.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	9.16	1.5	
SES	0.89	0.40	0.22*
Step 2.			
(Constant)	11.87	2.33	
SES	0.77	0.36	0.19*
Loneliness	-0.06	0.04	-0.13

Note.  $R^2 = .05$  for Step 1;  $\Delta R^2 = .02$  for Step 2 ( $p = .133$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 3. Hierarchical Regression of Loneliness Predicting Suicide after controlling for SES.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	2.02	0.15	
SES	-0.03	0.04	-0.08
Step 2.			
(Constant)	-0.06	0.04	
SES	-0.07	0.03	-0.17*
Loneliness	-0.02	0.00	-0.4***

Note.  $R^2 = .01$  for Step 1;  $\Delta R^2 = .15$  for Step 2 ( $p < .001$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 4. Hierarchical Regression of Loneliness Predicting Drug Use after controlling for SES, Ethnicity, and Greek Affiliation.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	8.8	2.41	
SES	0.55	0.33	0.15
Ethnicity	0.07	0.83	0.01
Greek	0.52	0.79	0.06
Step 2.			
(Constant)	8.18	2.83	
SES	0.59	0.34	0.16
Ethnicity	0.08	0.83	0.01
Greek	0.43	0.82	0.51
Loneliness	0.02	0.04	0.04

Note.  $R^2 = .01$  for Step 1:  $\Delta R^2 = .15$  for Step 2 ( $p < .001$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 5. Hierarchical Regression of Loneliness Predicting Alcohol Use after controlling for SES, Ethnicity, and Greek Affiliation.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	5.6	1.53	
SES	1.22	0.36	0.29**
Step 2.			
(Constant)	6.45	2.39	
SES	1.18	0.37	0.28**
Loneliness	-0.02	0.04	-0.04

Note.  $R^2 = .10$  for Step 1:  $\Delta R^2 = .00$  for Step 2 ( $p = .867$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 6. Hierarchical Regression of Loneliness Predicting BMI after controlling for SES and Ethnicity.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	32.25	2.15	
SES	-0.94	0.4	-0.2*
Ethnicity	-2.33	0.93	-0.21*
Step 2.			
(Constant)	33.98	3.1	
SES	-1	0.41	-0.21*
Ethnicity	-2.43	0.94	-0.22*
Loneliness	-0.03	0.04	-0.07

Note.  $R^2 = .1$  for Step 1;  $\Delta R^2 = .00$  for Step 2 ( $p = .500$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 7. Hierarchical Regression of Loneliness Predicting Unhealthy Eating Practices in Females after controlling for SES, Ethnicity, and Greek Affiliation.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	0.7	0.16	
SES	-0.01	0.02	-0.05
Ethnicity	0.1	0.06	0.19
Greek	0.07	0.06	0.13
Step 2.			
(Constant)	0.83	0.19	
SES	-0.02	0.02	-0.08
Ethnicity	0.1	0.06	0.18
Greek	0.09	0.06	0.17
Loneliness	0	0.00	-0.14

Note.  $R^2 = .04$  for Step 1;  $\Delta R^2 = .02$  for Step 2 ( $p = .192$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 8. Hierarchical Regression of Loneliness Predicting Lack of Exercise in Males after controlling for SES, Ethnicity, and Greek Affiliation.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	11.57	3.51	
Ethnicity	0.68	1.03	0.08
SES	0.17	0.46	0.04
Greek	-0.89	1.08	-0.1
Step 2.			
(Constant)	15.55	3.91	
Ethnicity	0.67	1.01	0.08
SES	-0.07	0.46	-0.02
Greek	-0.33	1.09	-0.04
Loneliness	-0.1	0.05	-0.25*

Note.  $R^2 = .03$  for Step 1:  $\Delta R^2 = .05$  for Step 2 ( $p = .036$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 9. Hierarchical Regression of Strength of Religious Faith Predicting Health Risk Behavior after controlling for SES.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	9.16	1.51	
SES	0.89	0.35	0.22*
Step 2.			
(Constant)	12.54	2.34	
SES	0.87	0.35	0.21*
SCSRF	-0.1	0.06	-0.16

Note.  $R^2 = .05$  for Step 1:  $\Delta R^2 = .03$  for Step 2 ( $p = .063$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 10. Hierarchical Regression of Transformed Strength of Religious Faith Predicting Health Risk Behavior after controlling for SES.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	9.16	1.51	
SES	0.89	0.35	0.22*
Step 2.			
(Constant)	7.45	1.63	
SES	0.87	0.35	0.21*
Transformed Log SCSRF	2.24	0.89	0.21*

Note.  $R^2 = .05$  for Step 1:  $\Delta R^2 = .05$  for Step 2 ( $p = .013$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 11. Hierarchical Regression of Positive Religious Coping Predicting Health Risk Behavior after controlling for SES.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	9.16	1.5	
SES	0.89	0.35	.22*
Step 2.			
(Constant)	10.71	2	
SES	0.88	0.35	0.22*
PRC	-0.07	0.06	-0.1

Note.  $R^2 = .05$  for Step 1:  $\Delta R^2 = .01$  for Step 2 ( $p = .243$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 12. Hierarchical Regression of Transformed Positive Religious Coping Predicting Health Risk Behavior after controlling for SES.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	9.16	1.5	
SES	0.89	0.35	0.22*
Step 2.			
(Constant)	8.24	1.64	
SES	0.89	0.35	0.22*
Transformed Log PRC	1.23	0.9	0.12

Note.  $R^2 = .05$  for Step 1;  $\Delta R^2 = .01$  for Step 2 ( $p = .176$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 13. Hierarchical Regression of Strength of Negative Religious Coping Predicting Health Risk Behavior after controlling for SES.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	9.16	1.5	
SES	0.89	0.35	0.22*
Step 2.			
(Constant)	7.47	1.91	
SES	0.9	0.35	0.22*
NRC	0.18	0.12	0.12

Note.  $R^2 = .05$  for Step 1;  $\Delta R^2 = .02$  for Step 2 ( $p = .155$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 14. Hierarchical Regression of Loneliness Predicting Health Promoting Behavior after controlling for SES, Ethnicity, and Greek Affiliation.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	19.58	5.34	
SES	0.91	0.74	0.11
Greek	-1.95	1.74	-0.1
Ethnicity	2.04	1.84	0.1
Step 2.			
(Constant)	32.32	5.92	
SES	0.23	0.72	0.03
Greek	-0.1	1.7	-0.01
Ethnicity	1.72	1.74	0.09
Loneliness	-0.32	0.08	-0.36***

Note.  $R^2 = .04$  for Step 1:  $\Delta R^2 = .11$  for Step 2 ( $p < .001$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 15. Hierarchical Regression of Strength of Religious Faith Predicting Health Promoting Behavior after controlling for Ethnicity and Greek Affiliation.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	22.56	4.9	
Ethnicity	2.28	1.82	0.12
Greek	-1.7	1.73	-0.09
Step 2.			
(Constant)	6.38	6.79	
Ethnicity	3.38	1.79	0.17
Greek	-0.32	1.72	-0.02
SCSRF	0.38	0.11	0.29**

Note.  $R^2 = .03$  for Step 1:  $\Delta R^2 = .08$  for Step 2 ( $p = .001$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 16. Hierarchical Regression of Transformed Strength of Religious Faith Predicting Health Promoting Behavior after controlling for Ethnicity and Greek Affiliation.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	26.01	4.73	
Ethnicity	0.34	1.75	0.02
Greek	-1.88	1.72	-0.1
Step 2.			
(Constant)	26.84	4.55	
Ethnicity	1.81	1.73	0.1
Greek	-0.79	1.68	-0.04
Transformed Log SCSRF	-6.62	1.96	-0.3**

Note.  $R^2 = .01$  for Step 1:  $\Delta R^2 = .08$  for Step 2 ( $p = .001$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 17. Hierarchical Regression of Positive Religious Coping Predicting Health Promoting Behavior after controlling for Ethnicity.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	18.11	3	
Ethnicity	3.22	1.7	0.16
Step 2.			
(Constant)	10.92	4.33	
Ethnicity	3.89	1.7	0.2*
PRC	0.3	0.13	0.2*

Note.  $R^2 = .03$  for Step 1:  $\Delta R^2 = .04$  for Step 2 ( $p = .025$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .



Table 18. Hierarchical Regression of Transformed Positive Religious Coping Predicting Health Promoting Behavior after controlling for Ethnicity and Age.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	22.87	9.29	-0.08
Ethnicity	1.22	0.81	0.13
Age	-0.08	0.45	-0.02
Step 2.			
(Constant)	29.71	9.62	
Ethnicity	1.52	0.81	0.16
Age	-0.29	0.45	-0.06
Transformed Log PRC	-4.41	1.93	-0.2*

Note.  $R^2 = .02$  for Step 1:  $\Delta R^2 = .04$  for Step 2 ( $p = .024$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 19. Hierarchical Regression of Negative Religious Coping Predicting Health Promoting Behavior after controlling for Ethnicity.

Variable	<i>b</i>	SE <i>b</i>	$\beta$
Step 1.			
(Constant)	18.07	3	
Ethnicity	3.25	1.71	0.16
Step 2.			
(Constant)	21.4	4.2	
Ethnicity	2.92	1.73	0.15
NRC	-0.29	0.26	-0.1

Note.  $R^2 = .03$  for Step 1:  $\Delta R^2 = .01$  for Step 2 ( $p = .266$ ) \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

VITA

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American Psychological Association  
Association for Behavioral Analysis International

**Clinical Experience:**

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*Assessment Practicum*

**Psychological Assessment Center, The University of Mississippi, MS**

Responsibilities include completing four comprehensive assessments within the Psychological Assessment Center, attending weekly assessment supervision meetings, engaging in the peer review of team member assessments, and working in the Office of Student Disabilities as a verification specialist, which involves recommending

student accommodations based on review of psychological assessments.

Supervisor: Dr. Scott Gustafson, Ph.D

**Summer 2013-Present**

Psychology Intern

**North Mississippi Regional Center (NMRC), Oxford, MS**

At an ICF/MR with varying levels of care, responsibilities included providing counseling services; writing and creating behavior plans; providing applied behavior analysis therapy; conducting assessments of current residents and prospective residents (intellectual, adaptive behavior skills, medication side-effects, dementia); and assisting individuals with communication devices and social skills.

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Behavioral Consultant

**Behavior, Attention, and Developmental Disabilities Consultants, LLC, Clarksdale Municipal School District, Clarksdale, MS**

As a Behavioral Consultant to the school district, responsibilities include conducting assessments (full battery, functional behavior, risk assessment); providing teacher and classroom consultations; providing in-services; training individual aids and teachers; monitor ABA/discrete trial programs; social skills training (individual and group); and providing classroom supports for children with developmental disabilities.

Supervisors: Emily Thomas-Johnson, Ph.D., BCBA-D and Sheila Williamson, Ph.D.

**Spring 2012-Summer 2013**

Therapist in Applied Behavior Analysis (ABA)

**Private residence, Oxford, MS**

Provided weekly in-home ABA therapy for a child with autism for a year and a half.

Supervisor: Corinn Johnson, M.A.

**Summer 2013**

Camp Counselor

**Camp BOLD**

Worked as a counselor for a summer day camp for children with autism spectrum and other developmental disorders and was paired one-on-one with an individual with an autism spectrum disorder.

**Fall 2011-Spring 2013**

Graduate Student Therapist

**Psychological Services Center, The University of Mississippi, MS**

Responsibilities include conducting screenings and intake interviews; individual and group therapy; attending weekly supervision meetings and providing and receiving feedback during weekly meetings.

Supervisors: John Young, Ph.D., Karen Christoff, Ph.D.

**Summer 2011-Summer 2012**

Education and Research Intern/Research Assistant  
**Education and Research, The Baddour Center, Senatobia, MS**

As an intern at the Baddour Center (a private residential facility for adults with mild to moderate intellectual disabilities) responsibilities include individual therapy; group therapy (grief, roommates, social skills, disability support); staff training; conducting assessments (intellectual, adaptive behavior, medication side-effects, dementia, social skills, functional behavior); developing and implementing behavior plans; and various research projects.

Supervisor: Shannon L. Hill, Ph.D.

**Summer 2008-Summer 2010**

Mental Health Crisis Screener

**Treatment & Assessment Services, Houston, TX**

Duties included providing on call mental health crisis screenings to local hospitals and jail facilities in Burleson and Grimes County, facilitating crisis resolution, and coordinating hospital placement when appropriate.

Supervisor: Lawrence Story

**Winter 2008-Summer 2010**

Child & Adolescent Mental Health Caseworker

Full Time Position

**Mental Health Mental Retardation Brazos Valley, Bryan, TX**

MHMR Brazos Valley is a public non-profit community mental health center. Responsibilities as a child & adolescent mental health caseworker included providing service coordination and intensive skills training for children and adolescents with mental illness and severe behavioral disturbances.

Supervisor: Linda Snyder, M.S.

**Fall 2007-Summer 2008**

Service Coordinator

Full Time Position

**Mental Health Mental Retardation Brazos Valley, Bryan,**

**TX**

MHMR Brazos Valley is a public non-profit community mental health center. Responsibilities as a service coordinator included providing service coordination for clients with intellectual disabilities, which consisted of developing personal service plans, visiting clients monthly, attending medication clinic visits, and serving as a liaison between the client, their guardian, doctors, and service providers.

Supervisor: Jermaine East, M.S.

**Fall 2006-Fall 2007**

HelpLine Volunteer

**Student Counseling HelpLine, Texas A&M University**

The HelpLine provides information, referral, support, and crisis assessment and intervention for A&M students and those concerned about A&M students. Duties included completing forty hours of training on mental health issues, attending weekly supervision groups, volunteering for at least one shift per week and one weekend a month, and participating in continuing mental health education lectures throughout the semester.

Supervisor: Susan Vavra, M.S.

**Research Experience:**

**Fall 2012-Spring 2013**

Research Assistant: University of Mississippi Center for Contextual Psychology, University, MS.

Under the direction of Kelly Wilson, Ph.D.

Assisted in the development and activities of the research team. Duties included overseeing undergraduate research assistants, conducting ethics trainings, peer review, mentoring undergraduate research assistants, and organizing conference presentations.

**Fall 2010-Spring 2011**

Research Assistant: University of Mississippi, University, MS.

Under the direction of John Young, Ph.D.

MYPAC provides an array of services for Mississippi youth with Serious Emotional Disturbance as an alternative to traditional Psychiatric Residential Treatment Facilities. Duties included traveling to MYPAC sites around the state of Mississippi and administering psychometric batteries to parents and children receiving services.

- Fall 2010-Spring 2011**     Research Assistant: University of Mississippi, University, MS.  
Under the direction of Stefan Schulenberg, Ph.D.  
The BP Behavioral Health Grant project includes collaborating with nineteen mental health agencies along the Mississippi Gulf Coast to assess psychological variables, services provided, and treatment outcomes in the wake of the Gulf Oil Spill. Duties included constructing psychometric batteries, contacting assigned mental health sites to coordinate the use of the batteries, and visiting sites to distribute the batteries and provide information on how to administer them.
- Summer 2009-Fall 2009**     Research Assistant: Project ABC, Texas A&M University, College Station, TX.  
Under the direction of Jeffrey Liew, Ph.D.  
Project ABC examines the social, emotional, and personality aspects of human development, with a focus on early childhood. Duties included watching videos of parent/child interactions, coding them for measures of parent affect, and running reliability tests on coded data.
- Fall 2007**     Research Assistant: Eating Disorders Lab, Texas A&M University, College Station, TX.  
Under the direction of Marisol Perez, Ph.D.  
Received training in the Cognitive Dissonance Body Image Program and assisted in leading the Body Image Program in a local sorority.
- Fall 2005-Spring 2006**     Research Assistant: Couple Lab, Texas A&M University, College Station, TX.  
Under the direction of Douglas K. Snyder, Ph.D.  
Duties included watching and coding videos of couple interactions, entering coded data into an electronic database and performing topic specific article searches and wrote research briefs based on findings.

## Teaching/Training Experience:

**Fall 2013**

Faculty Training for Clarksdale Municipal School District

Developed an Attention Deficit Hyperactivity Disorder inservice and presented it to each school in Clarksdale Municipal School District over the course of the fall semester.

**Spring 2013**

Teaching Assistant

University of Mississippi, University, MS

Psychology of Learning

Instructor: Kelly G. Wilson, Ph.D.

Led bi-weekly review sessions, tutored upon request, and created, administered, and graded examinations, quizzes, and extra credit.

**Fall 2012**

Teaching Assistant

University of Mississippi, University, MS

Undergraduate Stress in the Modern World

Instructor: Kelly G. Wilson, Ph.D.

Created, administered, and graded examinations and papers.

**Fall 2012**

Education and Research Intern at The Baddour Center:

The Baddour Center, Senatobia, MS

As an intern I conducted inservice trainings for vocational staff members on positive behavior support in the workshops.

Supervisor: Shannon Hill, Ph.D.

## Presentations at Scholarly Meetings:

Magee, L. Christoff, K. (2013, September). *Childhood Internalizing Disorders: Prevalence, Assessment, & Treatment*. Poster presented at the 65<sup>th</sup> Annual Convention of the Mississippi Psychological Association, Biloxi, MS.

Magee, L., Nassar, S., Berkout, O., Wilson, K. & Kellum, K. (2013, May). *Preliminary Psychometric Properties of the Value Living Questionnaire-II: An Expanded Measure of Values and Committed Action*. Symposium presented at the 39<sup>th</sup> Annual Convention of the Association for Behavior Analysis, Minneapolis, MN.

Schulenberg, S. E., Davis, R. E., & Magee, L. J. (2011, June). *Logotherapy and psychological assessment: Integrating theory with research and practice*. Paper presented at the Eighteenth World Congress on Viktor Frankl's Logotherapy, Dallas, TX.

**Honors & Certifications:**

University of Mississippi Graduate School Honors Fellowship, 2010-Present  
Qualified Mental Health Professional Certification Spring 2009  
Qualified Mental Retardation Professional Certification Fall 2007  
Two-hundred hour service award Student Counseling HelpLine Spring 2007  
QPR Certification (Suicide Prevention) Fall 2006  
President's Volunteer Service Award Fall 2006  
National Dean's List Member Spring 2005  
Liberal Arts Foundation Scholarship Fall 2005  
National Society of Collegiate Scholars Member Spring 2004-2007

**References:**

Available upon request.