NEUROTICISM AND RELIGIOUS COPING STYLES AS MEDIATORS OF DEPRESSIVE AFFECT AND PERCEIVED STRESS

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Previous researchers have shown that the collaborative, self-directing, and deferring styles of religious coping result in different outcomes of depression under different levels of perceived stress. Neuroticism has also been shown to affect coping effectiveness overall or choice of coping method. However, little work has been done to investigate the association between neuroticism and the choice or effectiveness of religious coping styles in particular, or on the association of neuroticism and perceived stress. The present study addressed research questions by examining relations among neuroticism, perceived stress, objective life events, religious and non-religious coping styles, effectiveness of coping styles, and depression. Hierarchical multiple regression and correlational techniques found that religious coping styles predict depression, religious and non-religious coping correspond, and neuroticism predicts perceived stress beyond situational stressors. Neuroticism did not predict use of religious coping styles, but remaining personality factors were successful in predicting coping. Implications, limitations, and future directions are discussed.
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CHAPTER 1

INTRODUCTION

Relying upon religious beliefs and practices is a common method of coping with major life stressors such as negative life events and death anxiety. This is referred to as “religious coping” (Pargament, Smith, Koenig, & Perez, 1998). Pargament et al. (1988) has proposed three common patterns of religious coping: self-directing, deferring, and collaborative. The self-directing style involves attempts to solve problems without guidance from God. The deferring coping style refers to passively waiting for God to solve problems. The collaborative style seeks to solve problems with God as an active partner. The effectiveness of these coping styles has been shown to vary in different situations. For example, under conditions of high stress, the coping styles result in different levels of depressive affect, with participants experiencing more depression when using a self-directing coping style and lower depression when using a collaborative coping style (Bickel et al., 1998). Researchers have not yet examined the effectiveness of coping styles under varying conditions of stress among persons with varying degrees of neuroticism. The present study will focus on the effectiveness of different religious coping styles among people with varying levels of neuroticism and under different levels of perceived stress. Furthermore, the present study will compare religious coping with nonreligious coping to explore similarities and differences regarding what types of coping are used in various situations. The following sections will provide a review of the
relations between perceived control and depressive affect, and the relations between coping and stress. Next, a review of neuroticism and religious coping will be provided. Then, a study will be proposed to extend the existing literature.

Perceived Control and Depressive Affect

Learned helplessness, or a lack of perceived control over a situation, has been well documented as a factor strongly associated with depressive affect. For example, Burger and Arkin (1980) studied the relations among perceived control, predictability, and depressive affect in 34 male and 66 female undergraduates. The participants were exposed to an aversive noise while attempting to solve anagrams. They were divided into four experimental groups: controllable-predictable (solving the anagrams will stop the noise), controllable-unpredictable (solving the anagrams will lessen the noise but not stop it completely), uncontrollable-predictable (no connection between solving the anagram and noise exposure, but the noise was presented in equal intervals), and uncontrollable-unpredictable (no connection between solving the anagram and noise exposure, and the noise was presented in varying intervals). A no-noise control group was also used. Both before and after participating in the exercises, all participants were given the Multiple Affect Adjective Check List (MAACL) to assess depressive affect, and the Desirability of Control scale. Participants in the uncontrollable-unpredictable experimental group experienced deficits in performance on the anagram exercise as well as higher levels of depressive affect when compared to the no-noise control group, whereas participants in the other experimental groups, which allowed for either controllability, predictability, or both, did not show such deficits. This indicates that both control and predictability seem
to lessen learned helplessness, although they may function independently. Furthermore, those scoring high in the desire to have control over events showed stronger reactions to exposure to the aversive noise than did those low in the desire for control. This finding further illustrates the link between perceived control and stress reactions, such as depressive affect.

Raps, Reinhard, and Seligman (1980) conducted a similar study with a clinical population consisting of 48 male inpatients and outpatients of a Veterans Administration hospital. The experimental treatment was conducted in three phases. In the first phase, the participants were administered the Beck Depression Inventory-Short Form (BDI-SF) and then divided into two groups of nondepressed medical patients who waited, two groups of nondepressed medical patients who received helplessness training, and two groups of psychiatric patients who waited. The participants who received helplessness training were exposed to an uncontrollable aversive noise. In the second phase, each of the two groups under each condition received either a mood-elation or mood-neutral procedure in which the participants were presented and instructed to read aloud 60 positive self-referent statements or 60 neutral statements. In the third phase, each participant was given a series of anagram tasks to solve. At the end of each phase, the participants were administered a different form of the Depression Adjective Check List (DACL) to monitor the depressive affect elicited under each condition. Results showed no changes in affect under the mood-neutral procedure or the waiting periods. However, helplessness training induced depressive affect whereas the mood elation procedure decreased depressive affect in both helpless and depressed patients. These results support other findings regarding the
relation between perceived control and depressive affect, as well as the importance of situational variables in determining the level of depressive affect experienced.

In a study examining the interactions between perceived control and other attributions in predicting depression, Evans (1981) administered to 32 female and 30 male college students the Rotter I-E scale as a measure of generalized internal or external control expectancies, the Tiffany Experienced Control Scale (E-C) as a measure of current perceived control, and the Beck Depression Inventory (BDI) as a measure of depressive affect. Participants with an internal control expectancy who currently endorsed high levels of experienced control showed less depressive affect than those with internal control expectancies experiencing low levels of control. Those with internal control expectancies experiencing high levels of control also showed less depressive affect than those with external control expectancies, regardless of the level of current perceived control. Thus, an internal control expectancy appears less likely to lead to depressive affect than an external control expectancy. However, the current level of experienced control also determines the effectiveness of a control expectancy in preventing depressive affect.

Brewin and Furnham (1986) also conducted a study examining the link between learned helplessness and negative mood and self-esteem in 21 male and 71 female psychology undergraduates. They administered a self-esteem scale, the BDI, and an attributional style questionnaire consisting of 12 hypothetical outcomes in which subjects state the most likely cause of each outcome and rate it on internality, stability, and globality, and then rate how often similar events occur in their own lives. Although other
variables also accounted for variance in depression and self-esteem scores, perceiving the cause of negative outcomes to be global or wide-ranging was associated with lower self-esteem. This supports learned helplessness theory because perceiving the cause of a negative outcome as global indicates that it is perceived as less controllable.

Brown and Siegel (1988) also found a link between perceived control and depressive affect. In their study, 176 female adolescents were studied at two times approximately eight months apart. Participants were administered a measure of life stress, an attribution questionnaire, and the Center for Epidemiologic Studies Depression Scale (CES-D). Via hierarchical regression analyses, they found that internal, stable, and global attributions for negative events attributed to uncontrollable causes was related to increases in depressive affect. Conversely, internal and global attributions for negative events attributed to controllable causes were related to less depressive affect. Although control interacted with other attributions, it was nevertheless found to predict depression.

The above studies illustrate the link between perceived control and depressive affect. Although other variables may also have an impact on depressive affect, perceived control consistently predicts depression. This concept is crucial to the topic at hand, as the present study intends to investigate the ways in which coping methods induce a sense of control in stressful situations, resulting in lower levels of depression. The effectiveness or lack of effectiveness of a particular coping style is theorized to be a function of that coping style’s ability to increase a person’s perceived control of a situation. Furthermore, the reason individuals employ coping methods is often to manage stress, which often results from uncontrollable life situations.
Coping and Stress

Folkman and Lazarus (1980) define coping as cognitive and behavioral efforts to manage or tolerate the demands created by a stressful situation. Coping has been classified as having two major functions, which have been well recognized (Bickel, et al., 1998; Lazarus & Folkman, 1984). One type of coping is termed problem-focused, which attempts to manage the relation between the person and the environment by trying to solve problems, make effective decisions, and take action. The other type of coping is emotion-focused, which is used to change the meaning of situations to increase a person’s perceived control over the stressor (Folkman, 1984; Averill, 1973). At least in theory, the success of problem-focused coping is contingent on the success of emotion-focused coping, which will prevent emotions from interfering with cognitive problem-solving efforts (Folkman, 1984). Folkman and Lazarus (1980) have also shown that both types of coping are used in most situations, although they may be used in different proportions depending on the person’s appraisal of the situation as, for example, potentially controllable or not potentially controllable. Considering the general consensus of the literature regarding the link between perceived control and depressive affect, effective coping with stressors that prevents the manifestation of depressive affect may do so by providing a greater sense of perceived control.

To study the effect of coping on emotion, Folkman and Lazarus (1988) examined an older and a younger sample by administering the Ways of Coping Questionnaire and a list of emotions. The Ways of Coping Questionnaire is an inventory designed to assess
the extent to which a person uses cognitive and behavioral strategies to cope with a stressful situation. Factor analyses of the Ways of Coping Questionnaire have resulted in eight coping scales: (a) Confrontive Coping; (b) Distancing; (c) Self-Control; (d) Seeking Social Support; (e) Accepting Responsibility; (f) Escape-Avoidance; (g) Planful Problem-Solving; and (h) Positive Reappraisal. Participants indicated the extent to which they experienced each of the emotions on the presented list. It was reduced to four scales: (a) Worried/Fearful; (b) Disgusted/Angry; (c) Confident; and (d) Pleased/Happy. Coping accounted for a significant amount of the variance in all four of the emotion scales in the older sample and all but the Worried/Fearful scale in the younger sample. These findings are consistent with the theory that coping mediated emotional responses to stress.

In another study, DeLongis, Folkman, and Lazarus (1988) assessed 75 married couples 20 times over a six-month period. Their measures included: a revised Hassles and Uplifts Scale, which lists common events and asks participants to rate how much of a hassle or uplift each event is in their lives; the Daily Health Record, which includes questions about a single day’s health and mood; a self-esteem measure, which contained 10 items rated on a four point Likert-type scale; and an emotional support scale, which rated up to eight members of an individual’s social support network on four dimensions. Individuals with higher average stress levels were more likely to experience a change in mood following an increase in their already high daily stress. Furthermore, individuals whose mood fluctuated more from day to day were also more likely to have mood disturbances that coincided with stressful days. Although they did not measure neuroticism, the framework of the present study posits that persons high in neuroticism
are more likely to have fluctuations in mood from day to day, resulting in higher mood disturbance when under increased stress. Also, persons high in neuroticism may be more likely to perceive themselves as under high levels of stress than those low in neuroticism under the same levels of stress. As found in the above study, higher levels of chronic stress result in a greater link between stress and mood fluctuations or disturbances.

Hammen and Cochran (1981) studied the link between coping and emotion by examining how college students with varying levels of depression coped with naturally occurring stressful events. They administered the BDI to a sample of college students to assess for depression and a life stress inventory covering events experienced in the last six months. From these measures they obtained a group of 34 students with moderate levels of depression, 30 non-depressed students who reported high levels of stress, and 35 non-depressed controls. They then administered a semi-structured interview to the depressed students and non-depressed, high-stress students in order to assess participants’ perceptions of their most upsetting events as well as their attributions, expectations, and sense of control. They found no difference between the groups regarding causal perceptions. However, they did find a difference for non-attributional cognitions--specifically, degree of uncertainty and expectation of the event. Depressed students endorsed uncertainty to a greater degree. These findings provide further evidence for a link between perceived control and depressive affect. Specifically, the students with high levels of stress but low levels of depression may have had more effective coping styles that provided a greater sense of control.
To further illustrate the importance of perceived control in coping with stressors, Solomon, Regier, and Burke (1989) studied victims of two disasters. The first disaster was one of the worst floods in Missouri history, which took place in December of 1982. The second disaster, which took place in December of 1983, was a man-made disaster in which dioxin was found to be at toxic levels at several sites in Missouri and forced the evacuation of several communities. One of these sites had been previously stricken by the flood. This unique circumstance allowed the researchers to examine flood victims, dioxin victims, and victims of both disasters as well as a control group with no exposure. The investigators administered the Diagnostic Interview Schedule/Disaster Supplement (DIS/DS) to 543 participants, including 100 controls, and 100 who had been exposed to dioxin. The DIS/DS included questions regarding exposure to disaster, extent of harm, material loss, help sought from relief agencies, and attributions of blame for the event. Among the flood victims, those who blamed themselves for their losses experienced twice as many psychiatric symptoms as those who did not blame themselves, whereas extent of blaming others had no effect on psychiatric symptomatology. Among the dioxin exposure victims, the majority blamed others (business or government) for their loss, but those who did not blame others experienced three times as many symptoms. Thus, the degree of distress resulting from a disaster depends both on the type of disaster experienced and on the perceptions of who or what is at fault. In situations such as floods, the circumstances may be better resolved through problem-focused coping such as seeking help from a relief agency. Situations such as chemical exposure may be beyond the control of an individual, leading to higher distress and resulting in other forms of
coping such as blaming others, which may serve as a form of emotion-focused coping. These findings illustrate the link between emotion-focused and problem-focused coping described earlier.

A person’s perceptions of events can have an equal or greater impact on stress than the actual event. For example, Folkman and Lazarus (1986) studied 75 married couples by administering a specially constructed interview once a month for five months as well as assessing for depression once a month with the CES-D. The interview asked about the most stressful encounter of the previous week and was designed to assess the perceptions of what was at stake in each encounter, as well as coping options (something that could be changed, something that had to be accepted, something about which you needed to know more before acting, etc.). Coping was then assessed with the Ways of Coping Questionnaire and emotions were assessed by asking participants to what extent they experienced each from a list of 24 emotions. People higher in depressive symptoms perceived more at stake in each stressful encounter than those low in depressive symptoms, regardless of what was actually at stake. Although this does not directly support the link between coping and a sense of control in buffering depressive symptoms, it does provide evidence that an individual’s perceptions of an event can be as important as the actual event. Furthermore, the distorted perceptions of what is at stake is indicative of vulnerability to threat in the various domains affected by the stressful events, such as self-esteem, finances, physical health, and the well-being of loved ones (Folkman & Lazarus, 1986). This increased vulnerability to threat may be a result of chronic anxiety or personality differences, which were not measured. For example, people high in
neuroticism tend to experience negative emotions such as anxiety and depression and are more likely to appraise stressful situations as threats rather than challenges (Costa & McCrae, 1985).

In a similar study, Folkman, Lazarus, Gruen, and DeLongis (1986) investigated personality traits, primary appraisal (stakes), secondary appraisal (options for coping), eight forms of coping, and physical and psychological health status in 75 married couples. Primary and secondary appraisal, as well as coping styles, were measured in the same manner as in the study reviewed above. Psychological and somatic well-being were assessed with the Hopkins Symptom Checklist and a self-report questionnaire, respectively. Personality traits were measured with interviews assessing mastery, interpersonal trust, self-esteem, values and commitments, and religious beliefs. When using psychological symptoms as a dependent variable, results of hierarchical regression analyses indicated that personality variables (entered first) accounted for 18% of the variance. Primary appraisal (entered second) and coping (entered third) accounted for 17% and 9% respectively. When reversing the order of entry, coping accounted for 20% of the variance and primary appraisal accounted for 5%. Personality variables were always entered first because they were considered antecedents of appraisal and coping processes. These results are relevant to the present study because they support the concept put forth above that perceived control and coping are linked, as the personality variable of mastery is conceptually similar to perceived control (e.g., items measuring mastery included “I have little control over the things that happen to me, there is really no way I can solve some of the problems I have, I can do just about anything I really set my
mind to do”). Personality traits accounted for a large portion of the variance in psychological symptoms, indicating that perceived control would be similarly linked to psychological symptoms. Secondly, this study also implies that personality traits are antecedents of coping processes. The present study is operating under the same theoretical framework; however, the present study will evaluate the Big Five personality traits rather than the idiosyncratic personality measures used in the research reviewed here. Particularly, neuroticism is hypothesized to predict coping processes, resulting in different outcomes of psychological symptoms such as depression.

Neuroticism

The concept of neuroticism is widely debated and often viewed as lacking a clear definition, with psychologists and psychiatrists debating the different types of neuroses as well as the causes and cures for them. Various frameworks exist such as dynamic theories (neuroticism is a manifestation of underlying disturbance), learning theories (neuroticism is a result of an inappropriate contingency of conditioning), personal construct theories (constructs are so rigid that many life occurrences are not able to be interpreted, leading to anxiety), and cognitive theories (neuroticism results from specific types of information processing and selection; Furham, 1997; Young & Martin, 1981). Psychologists have noted how those high in neuroticism continue behaviors and thoughts that are self-defeating and cause distress, and have dubbed this use of self-defeating strategies the neurotic paradox. For purposes of the present study, the concept of the neurotic paradox is critical to the hypothesis that people high in neuroticism will selectively use more maladaptive patterns of coping.
Numerous studies have examined the relations of personality characteristics, particularly neuroticism, on coping with life events and predicting strategy use. For example, Jorm, et al. (2000) examined the ability of personality traits, particularly neuroticism and extraversion, to predict anxiety and depression. Participants included a cross-sectional sample of 2,677 participants between the ages of 18 and 79, reflecting the demographic composition of the general population of Australia, and a longitudinal sample of 441 individuals aged 70 and older who were followed for 3-4 years. Participants were administered the Eysenck Personality Questionnaire – Revised (EPQ-R) to assess personality traits and a commonly used measure of anxiety and depression developed by Goldberg (1988). In both studies, neuroticism predicted both anxiety and depression.

Prenda and Lachman (2001) studied the relation between social, cognitive, and personality correlates of future planning to perceived control and life satisfaction. Social correlates were age, sex, income, education level, and measures of social support. To measure cognitive variables they administered select subtests from the Wechsler Adult Intelligence Scale-Revised (WAIS-R; Wechsler, 1981). Personality, perceived control, and future planning were measured with scales of the Midlife Development Inventory (MIDI; Lachman & Weaver, 1998). Life satisfaction was measured with a four-item scale constructed for the experiment which measured satisfaction with life overall, with work, with health, and with family. Neuroticism and agreeableness were negatively related to future planning, and the effects of future planning were mediated by sense of control.
Both of these studies emphasize the importance and impact of neuroticism on outcome variables such as depression and life satisfaction.

Young and Martin (1981) examined how neuroticism related to the selection and processing of information. They administered the Eysenck Personality Questionnaire (EPQ), the Repression-Sensitization scale (R-S) and the Social Self-esteem scale (SSE). The R-S scale is derived from the Minnesota Multiphasic Personality Inventory (MMPI) and was used because persons obtaining a high sensitized score have been found to exhibit behaviors resembling people high in neuroticism. A clinical sample of 14 females and a non-clinical sample of 28 females were administered these scales and then were shown a video of a man reading a list of 20 positive and 20 negative words related to personality traits. Each participant was told the video was a live link and the words read by the male were related to results from the prior testing, even though in reality the video was recorded and the same list of words was presented to all participants. Results indicated that participants high in neuroticism recalled more negative words and fewer positive words than those low in neuroticism, suggesting a tendency for people high in neuroticism to selectively process self-deprecatory information over self-appreciatory information. This is further evidence of the neurotic paradox, in which individuals use self-defeating strategies (such as selectively attending to self-deprecatory information).

Darvill and Johnson (1991) studied the relation of personality to optimistic bias and perceived control of life events. In their study, 30 male and 79 female college student of mainly Japanese and Caucasian ancestry completed three measures. One measure was obtained from previous research and consisted of a list of 35 life events such as
graduating in the top third of your class, developing cancer, and being sued by someone. Positive and negative events were mixed and presented in random order. Participants were asked to rank the probability of each event happening to them as opposed to the likelihood of the events occurring to others of the same age, sex, and education level on a Likert-type scale ranging from 1 (far less likely) to 7 (far more likely). A second measure asked the participants to rank their perceived control over the occurrence of each of the events. Half of the participants received the control question first, while the other half received the probability question first. Finally, participants were administered the EPQ-R.

In general, participants were slightly optimistic concerning the occurrence of positive events, more optimistic about the non-occurrence of negative events, and perceived themselves to be in moderate to strong control of event occurrence. People with stronger perceptions of control were more likely to be optimistic about the occurrence of positive events and non-occurrence of negative events. Regarding personality traits, there was an association between optimism for positive events and extraversion. Further, there was an association between neuroticism and lower optimism and control. Specifically, participants higher in neuroticism were less optimistic about positive events, more pessimistic regarding negative events, and perceived themselves as having less control over positive and negative events, with positive events having less control than negative.

David and Suls (1999) conducted a study in which the impact of problem appraisals and the Big Five personality traits on coping strategy was studied. They had 95 men between the ages of 35 and 55 complete nightly diaries in which they provided a brief description of the most troubling event of the day. The event did not have to
necessarily have taken place on that day (e.g., the person may have been dreading an upcoming event), but it was the event that was most bothersome to them on that particular day. They then rated the undesirability of the event on a 6-point Likert-type scale ranging from 1 (extremely desirable) to 6 (extremely undesirable) and the controllability of the event on a 3-point Likert-type scale ranging from 1 (complete control) to 3 (no control). Participants were then asked to check if they used any thoughts or actions falling under the coping categories of distraction, situation redefinition, direct action, catharsis, acceptance, seeking social support, relaxation, and religion, all of which were defined for them. Personality traits were measured with the NEO personality inventory (NEO-PI), which consists of 181 items on a 5-point Likert-type scale. The personality traits were associated with specific types of coping. For example, neuroticism was associated with more use of catharsis, relaxation, and redefinition. Of particular interest to the present study is that extraversion was associated with use of religious coping, whereas conscientiousness was negatively associated with religious coping. The authors also tested whether personality and appraisals could predict coping strategy use, and found that neuroticism moderated the relation between perceived severity and use of distraction, relaxation, and religion. Participants with lower Neuroticism scores used less relaxation and distraction when daily stressors increased, whereas use of religious coping among participants with high N scores was not affected by problem severity. Among those with low N scores, increased problem severity led to more frequent use of religious coping. This study provides strong evidence for the notion that neuroticism has an effect
not only on an individual’s perception of the severity of an event, but also on the use or lack of use of religious coping methods.

Religious Coping

An increasing amount of research indicates that people may turn to forms of religious coping to deal with negative life events (Pargament et al., 1998). People turn to religious forms of coping in a wide variety of negative life situations, including illness (Tix & Frazier, 1998), mental illness and depression (Murphy et al., 2000; Nooney & Woodrum, 2002; Pargament, Tarakeshwar, Ellison, & Wulff, 2001; Smith, McCullough, & Poll, 2003), trauma (Calhoun, Cann, Tedeschi, & McMillan, 2000; Connor, Davidson, & Lee; 2003), death anxiety (Maltby & Day, 2000), and the death of a loved one (McIntosh, Silver, & Wortman, 1993). Furthermore, religious coping has been found to add variance explanation beyond that provided by nonreligious forms of coping, indicating that religious coping cannot be reduced to other nonreligious forms of coping. Also, measures of religious coping in particular better predict outcomes of stressful situations than generic measures of religiousness such as frequency of prayer or frequency of church attendance (Pargament et al., 1998). Pargament et al. (1992) proposed a model in which religious coping efforts mediate the relation between general religious orientation and specific outcomes to life events.

Included in the discussion of negative life events are more severe occurrences such as traumatic events. The importance of religiosity and spirituality in coping with traumatic events is a well-recognized phenomenon. In a theoretical discussion of spirituality and trauma, Decker (1993) noted that trauma will almost inevitably lead to
seeking a more meaningful existence on the part of the survivor, and that this renewed interest in finding meaning must be taken into consideration by clinicians in order to maximize effective, comprehensive clinical treatment. In a study of the relation between religion and trauma, Calhoun, Cann, Tedeschi, and McMillan (2000) studied 54 young adults with prior traumatic exposure. Participants were administered the Traumatic Stress Schedule, the Quest Scale, inquiries into religious participation, and the Posttraumatic Growth Inventory (PTGI), which measures the degree to which positive changes in one’s life are attributed the results of struggling with a traumatic event. The Quest Scale contains three subgroupings, consisting of readiness to face existential questions, self-criticism and perceptions of religious doubts as positive, and openness to religious change. The inquiries into religious participation consisted of asking participants whether they currently attend religious services, how often they attend, and how important religion is in their lives. The results of this study indicated that there was no relation between religious participation and reported growth; however, a specific aspect of religiosity, openness to religious change, independently predicted posttraumatic growth. These results are commensurate with the general consensus of the death anxiety literature that religious conviction may be more important than participation or acts. Furthermore, these results imply that religiosity may not be protective against PTSD, but rather that religiosity may increase as a means of coping with trauma.

Connor, Davidson, and Lee (2003) studied the relations between general spiritual beliefs, anger, and resilience with the severity of posttraumatic symptoms in trauma survivors. Participants were administered an online survey containing questions regarding
physical health, 11 items taken from the Conner-Davidson Resilience Scale, 13 items regarding general spiritual beliefs, and a subscale of the Davidson Trauma Scale to measure PTSD symptom severity. Of the 1200 respondents, only 648 endorsed having experienced a trauma. Greater anger and stronger spiritual belief was associated with greater distress from having experienced a traumatic event. Although the association between stronger spiritual beliefs and greater levels of distress was unexpected, this relation may be explained by the implications of other studies that religiosity emerges as a means of coping once a person is in distress rather than serves as a preventative mechanism from developing PTSD. The self-selected sample may also account for this finding.

Other studies have also examined the effectiveness of religious coping with more common general life stressors. Tix and Frazier (1998) studied the moderating effects of religious affiliation and the mediating effects of factors such as social support and perceived control in 174 kidney transplant patients and 123 significant others. At 3 months after surgery, participants were given a measure of religious coping, a measure of cognitive restructuring, a measure of social support, and a measure of perceived control. At 3 months and 12 months after surgery, participants were given measures of distress and life satisfaction. The use of religious coping was associated with less distress and greater life satisfaction at 3 months and 12 months in both the patients and significant others. Religious coping was robustly related to better adjustment beyond the effects of the proposed mediators.
Pargament et al. (1990) examined the role of religious coping in dealing with negative life events by administering measures pertaining to negative events, religious coping, nonreligious coping, and outcomes to 586 Christian participants. Negative events consisted of illness or injury to self or others, work-related problems, marital problems, and death of a close friend or family member. Outcome was measured by the General Health Questionnaire (GHQ), general outcome of the event (e.g., how well they handled the event itself), and religious outcome (e.g., spiritual growth associated with the event). Religious coping variables successfully predicted all three outcome variables. Specifically, beliefs in a just God, experience of God as a supportive partner, involvement in religious rituals, and search for support through religion were all associated with more positive outcomes. Furthermore, these variables predicted outcome beyond the effects of nonreligious coping variables.

Religious coping has also been found to be associated with lower levels of depression among individuals dealing with stressful situations. Smith, McCullough, and Poll (2003) conducted a meta-analysis of 147 investigations that examined the relations between religiousness and depressive symptoms. They found that the overall correlation between religiousness and depressive symptoms was -.096, indicating a mild association between greater religiousness and fewer symptoms. They found that results were moderated by the type of religiousness measure used, but were not moderated by gender, age or ethnicity. Furthermore, they found that the association between greater religiousness and fewer depressive symptoms was stronger in studies in which participants were experiencing stress due to recent life events.
Ano and Vasconcelles (2005) conducted a meta-analysis of 49 studies investigating the relations between positive and negative forms of religious coping and adjustment to stress. The authors examined four types of relations: the relation between positive religious coping and positive psychological adjustment to stress, the relation between positive religious coping and negative adjustment, the relation between negative religious coping and positive adjustment, and the relation between negative religious coping and negative adjustment. The investigators found that positive forms of religious coping are generally related to positive adjustment, whereas negative forms of religious coping are generally related to negative adjustment. This investigation is particularly relevant to the present study because it supports the notion that some forms of religious coping are more effective than other forms of religious coping, and may even predict outcome reactions to stressors.

In an investigation of religious and non-religious coping with stressors related to rheumatoid arthritis, Vandecreek, et al. (2004) administered a religious coping measure, six subscales from a non-religious coping measure, and a depression scale to 181 patients with rheumatoid arthritis. Correlational analyses indicated that religious and non-religious forms of coping were related and not completely independent, yet were each able to account for unique variance in coping with rheumatoid arthritis. This confirms findings from other studies indicating that religious coping is related to non-religious coping but can account for variance above and beyond that accounted for by non-religious coping. Furthermore, negative forms of religious coping were found to be positively associated with self-reported depressive symptoms, further confirming findings
that some forms of religious coping are more effective than others in alleviating or preventing depressive symptoms.

Murphy et al. (2000) studied 271 individuals diagnosed with clinical depression. They administered a well-validated measure of religious belief, the Beck Hopelessness Scale (HS; Beck et al., 1974) and the BDI. They also assessed variables such as church attendance, private religious practices (i.e., prayer), and religious affiliation. Religious coping variables added to the prediction of depression and hopelessness beyond what was accounted for by demographics. Specifically, religious belief was associated with less depression and lower hopelessness. This association, however, was not found with religious behavior. Murphy et al. suggested that religious belief may lead to lower levels of hopelessness, which leads to less depression, causing religious belief to also appear to be indirectly related to lower levels of depression.

Park, Cohen, and Herb (1990) conducted a prospective investigation of the effects of religiousness and religious coping on depression and anxiety. They conducted two studies comparing a total of 89 Catholics and 77 Protestants on measures of intrinsic and extrinsic religiosity, religious interest, life events, and trait anxiety and depression. Regression analyses were conducted for cross-sectional and prospective interactions. For Catholics, a cross-sectional interaction was found indicating that religious coping served a protective function in predicting depression resulting from negative but controllable negative life events. For Protestants, both studies found a prospective interaction indicating that high intrinsic religiousness was negatively associated with depression resulting from uncontrollable negative life events. Although Protestants and Catholics
differed on dimensions of intrinsic/extrinsic religiousness and controllability of negative events, the results nevertheless emphasize the importance and effectiveness of religious coping with negative life events in reducing the outcome of depression.

Pargament et al. (1988) proposed three styles of religious problem solving used to cope with negative life events. These three styles were determined through interviews and a review of the literature. The first style is the collaborative, in which the individual and God share responsibility for solving a problem. The second style is the self-directing, in which the individual holds all responsibility for solving a problem based on their abilities given to them by God. Third, the deferring style places all responsibility for solving the problem on God while the individual is a passive participant in the process. Furthermore, six phases of problem-solving were identified based on a review of the literature: define the problem, general alternative solutions, select a solution, implement the solution, redefine the problem, and maintain oneself emotionally. Two religious coping questions were generated for each of the six phases of problem solving under each style, resulting in 36 items composing the Religious Problem Solving Scales (RPSS). The questions were then administered on a 5-point Likert-type scale to 197 church members (Pargament et al., 1988) A factor analysis found that 35 of the 36 items loaded greater than .40 on their own respective factors and less than .30 on the other two factors. Thirty-one of the 36 items loaded greater than .60 on their own factors. The scale developed through this study therefore appears to be a promising and theoretically sound measure of the ways in which people use religion to aid in the problem-solving process.
Schaefer and Gorsuch (1993) examined the influence of situational factors in religious coping. They used three vignettes to create a situation of threat, loss, or challenge. They also re-worded various items on the RPSS (Pargament et al., 1988) to reflect a state rather than a trait measure. They found that state coping styles resulted in a more active role for God than did trait coping styles, and that increased perception of stress created by the vignettes also resulted in a more active role for God. The main implication of these findings to the present study is the importance of situational characteristics as well as the importance of perceptions. Therefore, the present study will assess both the number and severity of negative events that have occurred in participants’ lives as well as their perceptions of the events.

In another study of the impact of situational variation on religious coping Bickel et al. (1998) administered the Perceived Stress Scale (PSS; Cohen, Kamarch, & Mermelstein, 1983), the RPSS, and the BDI to 245 adult members of Presbyterian churches. Among participants who perceived themselves as being under high amounts of stress, those who had a higher collaborative score were less likely to be depressed, and those who had a higher self-directing score were more likely to be depressed. No significant interactions were found for those scoring high in the deferring style of religious coping. Furthermore, no interactions were found among those who perceived themselves as being under low amounts of stress. The authors argued that the different results for different perceptions of stress preclude any third variable explanation such as neuroticism. This argument is predicated on a conception of neuroticism that ignores situational influences in its expression. Differences in perceptions of stress may not
preclude the neuroticism argument because people who perceive themselves as being under low stress may not have reason to employ any coping style, hence the lack of any interaction found for the low stress condition. Furthermore, neuroticism may come into play by acting on more than one variable. For example, persons high in neuroticism may not only endorse higher levels of stress, but may also perceive situations as more stressful than persons low in neuroticism, even when facing similar situations.

Research Questions and Hypotheses

Based on the above literature and the theoretical framework developed throughout the review, the present study will address several research questions and specific hypotheses. First of all, how effective are the collaborative, self-directing, and deferring coping styles in dealing with perceived stress as reflected by symptoms of depression? Specific hypotheses regarding this research question include:

1. It is hypothesized that the use of the collaborative style of religious coping will be associated with fewer depressive symptoms than the use of the self-directing and deferring coping styles.

2. It is hypothesized that the use of the self-directing coping style will be associated with more depressive symptoms than the collaborative style, but fewer symptoms than the deferring style.

Secondly, how does neuroticism affect the perception of life events that require coping? The specific hypothesis regarding this research question is as follows:
3. It is hypothesized that higher levels of neuroticism will be associated with higher levels of perceived stress when experiencing life events that require coping.

Third, how do religious and non-religious coping correspond? The specific hypotheses regarding this research question include:

4. It is hypothesized that the collaborative style of religious coping will be positively associated with the seeking social support and positive reappraisal factors of the Ways of Coping Questionnaire.

5. It is hypothesized that the self-directing style of religious coping will be positively associated with the self-controlling, accepting responsibility, and planful problem-solving factors of the Ways of Coping Questionnaire.

6. It is hypothesized that the deferring style of religious coping will be positively associated with the distancing and escape-avoidance factors of the Ways of Coping Questionnaire.

Fourth, how does neuroticism relate to the use of coping styles (religious and non-religious) in the face of stress? Specific hypotheses regarding this research question include:

7. It is hypothesized that lower levels of neuroticism will be associated with the use of the collaborative style of religious coping and the seeking social support and positive reappraisal factors of non-religious coping.
8. It is hypothesized that higher levels of neuroticism will be associated with the use of the deferring style of religious coping and the distancing and escape-avoidance factors of non-religious coping.
CHAPTER 2

METHOD

Participants

The participants recruited for the purposes of this study were selected from a population of undergraduates at the University of North Texas. The experimenter recruited 226 students. Approximately equal numbers of males ($n = 108$) and females ($n = 118$) were recruited to allow for the examination of gender differences. The racial/ethnic composition was approximately 72.3% Caucasian ($n = 162$) with a substantial number of African American ($n = 30, 13.4\%$) and Hispanic ($n = 19, 8.5\%$) students, and a smaller representation of other groups, reflecting the composition of the student population of the University of North Texas and the general population of the United States. No subgroup was excluded for any reason from participation in this study. The ages of the participants ranged from 18 to 53 ($M = 20.63, SD = 4.7$), with 91.1% falling within the ages of 18 and 24, reflecting the typical age of undergraduate students; no participants were excluded on basis of age. Almost all of the participants (98.7%) were students enrolled in an undergraduate psychology course for which they received credit in exchange for participation in the study. Participation was completely voluntary.

Materials

Perceived stress was assessed using the Perceived Stress Scale (PSS). The PSS (Cohen, 1983) was designed to measure global perceived stress and is
composed of general questions relatively free of content pertaining to any specific subgroup, along with response alternatives that are easy to understand. The PSS consists of 14 items that measure the degree to which situations in life are perceived as stressful and to which respondents find their lives uncontrollable, unpredictable, and overloaded. Respondents answer items using a five-point, Likert-type scale ranging from 0 (never) to 4 (very often). Half the items are reverse scored, and then all 14 items are summed to obtain a total score. Correlations between the PSS and life events range from small to moderate but increase when the PSS is correlated with perceptions of the impact of the events. Internal consistency coefficient alphas were found to be as high as .86. The PSS is a widely used measure in research (Bickel, et al., 1998; Marcus, et al., 2003; Bowen & D’Arcy, 2003).

A revised version of the Social Readjustment Rating Scale (SRRS) was used as an objective measure of stressful life events that require the use of coping behavior (Holmes & Rahe, 1967; Scully, Tosi, & Banning, 2000). The SRRS is a widely used measure that was developed by listing 43 empirically derived life events and asking participants to rate the amount of readjustment required for each event regardless of the desirability of the event. Participants used marriage as a reference for comparison, which was assigned an arbitrary value of 500. The means of the participants’ ratings were divided by 10 to yield weights ranging from 100 (death of a spouse) to 11 (minor violations of the law). Marriage retained a value of 50, and other examples include pregnancy (40), foreclosure (30), change in residence (20), and vacation (13). Scully, Tosi, and Banning (2000) constructed a revised version of the SRRS by replicating the procedure used by Holmes.
and Rahe (1967) but with updated questions (e.g., two items referred to loans of $10,000, which was updated to $51,000). They obtained new rank order weights for the life events, and then rated events as desirable, undesirable, or neutral. They found that scores for undesirable events accounted for 19% of the variance of scores on an abbreviated version of the Symptom Checklist-90, whereas desirable events accounted for 13% and neutral events accounted for 8% of the variance, concluding that the SRRS continues to be a valid measure of stressful life events and their impact.

Personality factors were measured using the NEO Five Factor Inventory (NEO-FFI). The NEO-FFI measures five basic dimensions of personality: Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). The NEO-FFI is a 60 item inventory, with three additional questions at the end, inquiring if the participant has given a response to all of the statements, correctly identified their response, and answered honestly and accurately (Costa & McCrae, 1989). Participants respond to each item using a Likert-type scale ranging from 0 (strongly disagree) to 4 (strongly agree). Items for each personality dimension are summed, giving a total score for each of the five personality domains. Scores are then converted to t-scores and are classed from very low to very high. Costa and McCrae (1989), using college students ($N = 983$), correlated the NEO-FFI with the NEO-PI and found correlations ranging from .75 (C) to .89 (N). Internal consistency coefficient alphas were also found to be .89 (N), .79 (E), .76 (O), .74 (A) and .84 (C).

Religious coping styles were assessed using the Religious Problem Solving Scales (RPSS; Pargament et al., 1988). The RPSS consists of three subscales that measure the
extent to which participants use self-directing, deferring, and collaborative religious coping styles. The inventory consists of 36 items divided into the three subscales, with 12 items under each subscale. Participants respond to the items using a five-point, Likert-type scale ranging from 1 (never) to 5 (always). Items of each subscale are summed and divided by 12 to yield a scale score for each of the religious problem solving styles. The three scales are moderately intercorrelated: Collaborative with Self-Directing \((r = -0.61)\), Collaborative with Deferring \((r = 0.47)\), and Self-Directing with Deferring \((r = -0.37)\).

Internal consistency coefficient alphas were found to be high: Collaborative (.94), Self-Directing (.94), and Deferring (.91). The scales also demonstrated adequate validity. The three styles were differentially associated with measures of religiousness such as frequency of prayer, religious salience, intrinsic religiousness, frequency of church attendance, and doctrinal orthodoxy. Furthermore, the collaborative and deferring styles were positively associated with religiousness measures, whereas the self-directing style was negatively related to religiousness (Pargament et al., 1988). For purposes of the present study, a qualifying sentence was added to the instructions indicating that participants may substitute their term of choice in place of the term “God” if they wished.

The Ways of Coping Questionnaire (Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen 1986) is a widely used measure of coping derived from the Ways of Coping checklist (Folkman & Lazarus, 1980) and was used in the present study as a measure of more general forms of coping. The Ways of Coping Questionnaire contains 66 items to which the participant answers on a 4-point Likert-type scale ranging from 0 (not used) to 3 (used a great deal), and describes a range of coping and behavioral
strategies that people use to manage internal and external demands in a stressful 
encounter. The questionnaire consists of items reflecting various domains of coping, such 
as avoidance, isolation, suppression, information-seeking, and direct action. The items 
are classified into two categories: emotion-focused and problem-focused. Participants are 
asked to have a specific stressful event in mind that they had to cope with when 
responding to the items. Examples include: “made a plan of action and followed it,” 
“stood my ground and fought for what I wanted,” “accepted sympathy and understanding 
from someone,” and “tried to forget the whole thing.” The questionnaire has been shown 
to have high internal consistency, with the problem-focused scale demonstrating a 
Cronbach’s alpha of .80 and the emotion-focused scale demonstrating a Cronbach’s alpha 
of .81. The questionnaire has also demonstrated adequate validity. Scherer, Wiebe, 
Luther, and Adams (1988) analyzed the factor stability of the questionnaire and found 
support for 5 factors, including problem-focused coping, detachment, wishful thinking, 
seeking social support, and focusing on the positive, indicating good convergent validity. 
Folkman, Lazarus, Dunkel-Schetter, Delongis, and Gruen (1986) found support for 8 
factors. Furthermore, an analysis of the original checklist, which consists of the same 
questions as the questionnaire, indicated that enough variance was not shared by the 
emotion-focused and problem-focused scales to support their independent use (Folkman 
& Lazarus, 1980). It must be noted that this measure is not intended to be a measure of 
consistent and stable coping styles, but rather a measure of the coping methods 
implemented to deal with one specific stressful encounter. For the purposes of the present 
study, it was assumed that if an individual has a coping style that is stable over time, they
will implement specific methods related to that coping style when dealing with a specific stressor.

Depressive symptoms were assessed with the Center for Epidemiological Studies – Depression Scale (CES-D; Radloff, 1977). The CES-D consists of 20 questions that cover affective, psychological, and somatic symptoms. The respondent specifies the frequency with which the symptom was experienced during the previous week (e.g., a little, some, a good part of the time, or most of the time). Items include: “I felt sad,” “I felt that I was just as good as other people,” and “I felt I could not get going.” Possible scores range from 0 through 60, with higher scores indicating more severe depressive symptoms (Carroll, Fielding, & Blashki, 1973). The CES-D has shown high internal consistency reliability (Cronbach’s alpha consistently > .80) and acceptable convergent and discriminant validity in a variety of populations, with satisfactory generalizability across samples (Fountoulakis et al., 2001; Hann, Winter, & Jacobsen, 1999; Radloff, 1977; Scott & Melin, 1998).

For the purposes of qualitative analyses, a brief statement was also included (Appendix A) asking participants to describe how they use religion to cope with stressors in their lives.

Procedure

Participants consisted of undergraduate students enrolled in psychology courses at the University of North Texas. They were recruited through a sona-systems Web site sponsored by the Psychology Department which potential participants use to volunteer for participation in experiments to fulfill course requirements. All students were allowed
to volunteer for participation in the current study with no groups excluded for any reason. The Web site contained a brief description of the study (Appendix B). Subsequent to volunteering for participation, participants were informed of administration location and time. Prior to survey administration, an information notice was administered according to IRB guidelines, which also informed the participants that they may withdraw at any time without penalty. After administration of the information notice (Appendix C), a demographics questionnaire (Appendix D) was administered for information such as gender, race/ethnicity, and religion so that these variables may be explored for demographic differences in the findings. The researcher then administered the surveys and asked the participants to read all instructions, answer all questions, and to respond honestly. Upon completion of the surveys, the participants were thanked for their cooperation, any questions were answered, and course credit points were awarded.
CHAPTER 3

RESULTS

Reliability of Scales

Each of the six scales used for the present study demonstrated adequate to excellent reliability. The scales used to measure stress appeared to demonstrate adequate to excellent reliability, with the PSS (Cohen, 1988) demonstrating a Cronbach’s alpha of .87, and the revised SRRS (Holms & Rahe, 1967; Scully, Tosi, & Banning, 2000) demonstrating a Cronbach’s alpha of .54. The measures of coping both demonstrated excellent reliability, with the WOC (Folkman, et al., 1986) demonstrating a Cronbach’s alpha of .91 and the subscales of the RPSS (Pargament, 1988) demonstrating Cronbach’s alphas of .95, .97, and .94 for the Collaborative, Self Directing, and Deferring subscales, respectively. The subscales of the NEO-FFI (Costa & McCrae, 1989) demonstrated Cronbach’s alphas ranging from .70 to .80, and the CES-D (Radloff, 1977) demonstrated a Cronbach’s alpha of .89, thus indicating excellent reliability on both measures. The means and standard deviations of the measures and subscales of the measures are presented in Table 1.

Tests of A Priori Hypotheses

A series of multiple regressions and correlational analyses were used to test each hypothesis for each research question. An alpha level of .05 was used for all statistical analyses. For the first research question, a hierarchical regression analysis was
performed to test each hypothesis. The proportion of variance accounted for by each coping style over and above the previous coping style was examined using depression score as the outcome variable. These analyses were repeated with the entry of continuous demographic variables (age and education) into the regression equation first, followed by each of the three religious coping styles. This allowed for the examination of the impact of religious coping over and above that of age and education. The order of the three religious coping styles was then altered to examine the proportion of variance accounted by each coping style in all six possible orders in predicting depression.

Table 2 shows the correlation and regression indices for the first research question. In the first equation, the collaborative style was entered first after age and education, followed by the self-directing and deferring styles. In this equation, the first step of entering the collaborative style did not result in a significant change in the amount of variance accounted for beyond that accounted for by age and education. However, upon entry of the self-directing and deferring styles, a significant change in the variance accounted for occurred with the entry of each coping style, respectively. When the order of entry was alternated, fewer significant changes were noted. For example, when collaborative was entered first and deferring second, the second step with the inclusion of deferring was the only step resulting in a significant change. Similarly, when deferring was entered last, only the last step resulted in a significant change. Interestingly, when collaborative was entered last, only the last step resulted in a significant change. Therefore it was concluded that the first model proposed with the original order of entry (collaborative, self-directing, deferring) best represented the relative importance of the
coping styles. The relations of the three coping styles in predicting depression were in the
directions hypothesized, two of which were significant. Given that all three coping styles
predicted depression in the directions hypothesized, and given the best regression model
described above, hypotheses 1 and 2 were generally supported. In other words, the use of
the collaborative coping style was associated with fewer symptoms of depression, more
so than the use of the self-directing or deferring styles. Likewise, the use of the self-
directing coping style was associated with fewer depressive symptoms, more so than use
of the deferring style.

Table 3 shows the correlation and regression indices for the second research
question. For this research question, a multiple regression procedure was used with life
events and neuroticism as predictors, and perceived stress as the outcome variable. The
amount of variance accounted for by life events was partialled out in some equations to
allow the examination of how much variance neuroticism accounts for in predicting
perceived stress regardless of the objective level of stressful events occurring in one’s
life. A series of four regression equations were conducted for this analysis. An equation
was performed with neuroticism entered first followed by life events, and a second
equation was performed with these variables entered in reverse order. Two additional
equations were performed with the continuous demographic variables of age and
education entered first simultaneously, followed by neuroticism and then life events, with
the order of neuroticism and life events then reversed. Life events and neuroticism both
significantly predicted perceived stress; however, neuroticism accounted for a
substantially greater amount of variance than life events in predicting perceived stress.
For example, in the first equation performed, neuroticism accounted for 53% of the variance in predicting depression, and life events accounted for only an additional 1%. When the order was reversed, life events accounted for 5.9% of the variance in predicting perceived stress, and neuroticism accounted for an additional 48.6%. The inclusion of age and education into the regressions yielded similar findings for the ability of life events and neuroticism to predict perceived stress. Therefore, hypothesis 3 was supported, indicating that neuroticism significantly predicts perceived stress even when accounting for stressful life events.

For the third research question, each hypothesis was tested using a correlational analysis to examine the relations between religious coping styles and nonreligious coping (see Table 4). Hypothesis 4 was tested by examining the correlation between the collaborative score from the religious coping measure and the seeking social support and positive reappraisal scores from the non-religious coping measure, respectively. As expected, the collaborative coping style was significantly positively correlated with seeking social support and positive reappraisal, thus supporting hypothesis 4.

Hypothesis 5 was tested by correlating the self-directing score with the self-controlling, accepting responsibility, and planful problem-solving factors, respectively (see Table 4). The self-directing coping style was negatively correlated with self-controlling ($r = -0.112, p = .09$), accepting responsibility ($r = -0.039, p = .56$) and planful problem solving ($r = -0.02, p = .75$). None of the correlations were statistically significant. Therefore, hypothesis 5 was not supported.
Hypothesis 6 was tested by correlating the deferring style of religious coping with the distancing and escape-avoidance factors of general coping (see Table 4). As predicted, the deferring coping style was significantly positively correlated with distancing and escape-avoidance. Therefore hypothesis 6 was supported.

Tables 5 and 6 show the correlation and regression indices for hypotheses 7 and 8 of the fourth research question, respectively. For this research question, each hypothesis was tested with multiple regression equations. For hypothesis 7, perceived stress, seeking social support, positive reappraisal, and the collaborative coping style were used as predictors to examine the proportion of variance accounted for in predicting the neuroticism personality factor. Perceived stress was entered first into the equation, followed by collaborative, then positive reappraisal and seeking social support were simultaneously entered last. The order of the last two steps was then reversed, with positive reappraisal and seeking social support entered second into the equation, and collaborative entered last. These two equations were then repeated with age and education entered simultaneously first into each equation. The collaborative coping style did not predict the neurotic personality factor regardless of the order of entry. The entry of age and education resulted in virtually identical results. Therefore, hypothesis 7 was rejected, indicating that lower levels of neuroticism were not associated with use of the collaborative style of religious coping.

For hypothesis 8, perceived stress, defer, distancing, and escape-avoidance were used as predictors to examine the proportion of variance accounted for in the neurotic personality factor. Again, perceived stress was entered first, followed by defer, and then
by distancing and escape-avoidance simultaneously. The last two steps were reversed as in the analysis of hypothesis 7, and the equations were repeated with the entry of age and education first into the equation. Deferring did not predict the neurotic personality factor regardless of the order of entry. The inclusion of age and education again resulted in virtually identical findings. Therefore hypothesis 8 was rejected, indicating that high levels of neuroticism were not significantly associated with the use of the deferring style of religious coping. However, distancing and escape-avoidance both significantly predicted the neurotic personality style. Therefore, neuroticism does appear to be associated with the non-religious coping factors.

Although not hypothesized, similar procedures were used to predict neuroticism using perceived stress, self-directing, self-controlling, planful problem solving, and accepting responsibility as predictors. No associations between coping styles and neuroticism were found.

Supplementary Analyses

Categorical demographic variables were examined as possible moderators of the predicted relations via multiple regression procedures. Major categories of gender (male vs. female), ethnicity (Caucasian, African-American, Hispanic), and religion (Baptist, Christian non-denominational, Spiritual but not religious) were analyzed separately on the study hypotheses to determine if the overall patterns found are differentially applicable to subsets of the sample. Table 7 summarizes the differences found for each hypothesis across subsets.
In the analyses comparing gender, the overall patterns of the results remained virtually unchanged, with slight alterations in the strengths of the relationships. The most important difference occurred on research question 1. For males \((n = 108)\), the collaborative coping style was a stronger predictor of depression than the deferring coping style. For females \((n = 118)\), the directions were reversed, with the deferring style predicting depression better than the collaborative style. The directions of both styles in their prediction of depression remained the same (e.g., collaborative predicted negatively, deferring predicted positively).

In the comparison of racial ethnic groups, Caucasians were compared with non-Caucasians. Members of non-caucasian racial and ethnic groups were combined into a single group due to the limited number of racial and ethnic minorities in the sample. For Caucasians \((n = 162)\), the overall patterns of the results found in the primary analyses remained virtually unchanged. For non-Caucasians \((n = 62)\), considerable differences were found in the results. Namely, on Hypotheses 1 and 2, none of religious coping styles successfully predicted depression. On Hypothesis 3, the objective number of life events did not significantly predict perceived stress. On Hypothesis 6, the escape-avoidance coping factor did not significantly predict use of the deferring coping style. Hypotheses 7 and 8 remained unsupported.

For the third supplementary analysis, the religious categories of Baptist \((n = 34)\), Spiritual but not religious \((n = 39)\), and non-denominational Christian \((n = 47)\) were compared. Other religious groups were excluded from this analysis due to their low representation in the sample. On Hypotheses 1 and 2, none of the religious coping styles
predicted depression for the Spiritual group, only the collaborative coping style predicted depression for the Non-denominational group, and all three coping styles positively predicted depression for Baptists, thus leading to a rejection of hypothesis 1. On Hypothesis 3, objective life events did not predict perceived stress when neuroticism was entered into the equation for the Spiritual group. For the Non-denominational and Baptist groups, life events did not predict perceived stress. On Hypotheses 4, 5, and 6, contrary to the primary analyses, the seeking social support non-religious coping factor was not significantly correlated with the collaborative religious coping style for the Spiritual and Non-denominational groups; the finding held for Baptists. Furthermore, the distancing and escape-avoidance factors did not correlate with the deferring style across all three groups. On Hypotheses 7 and 8, for the Spiritual group, neuroticism was significantly positively associated with use of the deferring style. For the Non-denominational group, neuroticism was significantly negatively associated with use of the collaborative style and significantly positively associated with use of the self-directing style. For Baptists, neuroticism was not associated with coping styles differently from the findings of the primary analyses.

Qualitative Data Analysis

Included in the questionnaire packet was an open-ended question asking the participants to briefly describe how they used religion to cope with stressors in their lives. A total of 226 responses were obtained. The responses were typed and their order randomized before analysis. The researcher and a volunteer rater independently examined all responses to search for themes and agreed on 13 categories. The categories determined
were as follows: 1) no use of religious coping, 2) use of religious coping for everyday problems, 3) use of religious coping as a last resort for uncontrollable problems, 4) use of prayer or talking to God, 5) use of religion to provide hope for the future, 6) use of religion to provide understanding or deal with confusion, 7) mention of a specific deity or religion (e.g., Jesus), 8) use of religion as a source of social support such as through church attendance, 9) use of religion to provide a sense of control through a belief in “God’s plan,” 10) little or no use of religious coping but an expressed desire to use more religious coping or be more religious, 11) the Self-Directing coping style described above, 12) the Collaborative coping style described above, 13) the Deferring coping style described above. Subsequent to the identification of the above themes, the researcher and a second volunteer rater again independently examined each response and rated the presence or absence of each theme in each response, with a rating of 1 for ‘present’ and a rating of 0 for ‘not present’. A kappa statistic was then computed on each variable to examine the level of interrater agreement. Interrater agreement was significantly above chance at $p < .05$ for all but the second theme (use of religion for everyday problems), which was marginal at $p = .06$.

Point biserial correlations were computed among the theme ratings and between the theme ratings and the major study variables of perceived stress, life events, neuroticism, depression, and the three religious coping styles. The intercorrelations of the theme ratings were in many cases significant but moderate ($r = -.507$ to $.294$), in the expected directions. For example, the “atheist/no religious coping” theme (category 1) was significantly negatively correlated with all but three of the remaining variables,
whereas other variables shared positive relations. The “Self-Directing” theme was positively correlated with the “last resort” theme ($r = .181, p = .006$) whereas the remaining two religious coping style themes were not significantly correlated with the “last resort” theme ($r = -.111, p = .093; r = -.023, p = .73$). Conversely, the “Collaborative” and “Deferring” themes were significantly positively correlated with the theme indicating use of religion for “everyday problems,” ($r = .278, p < .001; r = .130, p = .049$) whereas the “Self-Directing” theme was significantly negatively correlated with the “everyday problem” theme ($r = -.140, p = .035$).

The correlations of the qualitative ratings with major study variables were varied. Perceived stress was significantly correlated only with the use of “prayer” ($r = .188, p = .005$) The use of “prayer,” the mention of a “specific religion,” and the expressed “desire to use more religious coping” were all significantly positively correlated with life events ($r = .136, p = .041; r = .218, p = .001; r = .15, p = .025$). No significant correlations were found with neuroticism or depression. The Deferring scale of the religious coping measure was significantly negatively correlated with the “Self-Directing” qualitative rating category, and the atheist category. It was significantly positively correlated with all the remaining qualitative variables except “use as a last resort,” “use for understanding,” “social support,” and a “desire to use more.” The Self-Directing subscale of the religious coping measure demonstrated an almost opposite pattern of relations with the qualitative ratings categories. It was significantly negatively correlated with most categories, including the “Collaborative” and “Deferring” qualitative ratings, and it shared a positive correlation with the “atheist/no religious coping” category. The Collaborative scale of the
religious coping measure demonstrated virtually identical relations to the qualitative variables as the Deferring scale, except that the relations were somewhat stronger.

Post Hoc and Exploratory Analyses

In order to obtain neuroticism scores for participants, the entire NEO-FFI (Costa & McCrae, 1989) was administered, thus yielding scores for each of the Big Five personality factors (neuroticism, extraversion, openness, agreeableness, and conscientiousness). Given the lack of significant findings between neuroticism and the use of the three religious coping styles for hypotheses 7 and 8, the same procedures were repeated with each of the remaining four personality factors. In other words, the three religious coping styles and corresponding non-religious coping factors were analyzed to examine their respective ability to predict each of the remaining four personality factors. For example, a regression equation was conducted with age and education entered first simultaneously, followed by perceived stress, then collaborative, and lastly positive reappraisal and seeking social support simultaneously to predict the extraversion personality factor. This procedure was identical to that used for hypothesis 7, with the exception that extraversion was substituted for neuroticism in each equation. The order of the last two steps was then reversed as in the a priori analyses of hypothesis 7. Similar analyses were conducted with deferring, self-directing, and corresponding non-religious coping factors to predict extraversion, as in the a priori analyses (e.g., hypothesis 8). The analyses were then repeated with each of the remaining personality factors substituted for neuroticism. As can be seen in Table 8, each of the remaining four personality factors were significantly associated with use of each of the three religious coping styles above.
what was predicted by age, education, perceived stress, and the non-religious coping factors. Extraversion, agreeableness, and conscientiousness each were positively associated with use of the collaborative and deferring styles, whereas they were negatively associated with use of the self-directing style. Openness was associated with the three styles in the opposite direction, thus being negatively associated with the collaborative and deferring styles while positively associated with the self-directing style. Therefore, although the specific proposed hypotheses regarding the ability of personality, and in particular neuroticism, to predict coping were rejected, subsequent analyses appear to support the notion that other personality factors do indeed predict the coping patterns.
CHAPTER 4

DISCUSSION

The findings of the present study have numerous implications for the coping and religious coping literature, as well as personality theory. The first research question concerned how religious coping styles might predict depression. For example, it was hypothesized that use of the collaborative coping style would be associated with lower levels of depression, whereas use of the deferring style would be associated with higher levels of depression. This hypothesis was based on findings from previous research (Bickel, et al., 1998). The current findings supported these hypotheses. This implies that attempting to solve problems with cooperation from God in addition to personal efforts (collaborative) results in less depression than relying solely on the efforts of God and making little or no personal effort to solve problems (deferring). Attempting to solve problems independently of God’s help (self-directing) appears to result in lower levels of depression than working together with God but in higher levels than relying solely on God.

The present results indicate that certain forms of religious coping are more effective in preventing depression when dealing with stress than others. Working together with God when solving problems (collaborative) is associated with less depression than relinquishing all control to God and taking a less active role in solving problems (deferring). Taking a more active role with little help from God (self-directing) is
associated with more depressive symptoms than working with God, and with fewer depressive symptoms than relying totally on God to solve problems. These findings may be explained by the theoretical model proposed in this study, specifically that more effective coping styles function successfully as a result of their ability to induce a sense of control. This is consistent with learned helplessness theory outlined in the above literature review (Seligman, 1975).

These results also appear consistent with the theory proposed by Folkman (1984). Specifically, coping can be viewed as existing in two forms. As delineated in the literature reviewed above, problem-focused coping attempts to manage the relation between the person and environment by solving problems, making decisions, and taking action; whereas emotion focused coping attempts to change the meaning of situations to increase the individual’s sense of control. Problem-focused coping is contingent on the success of emotion-focused coping that prevents emotions from interfering with cognitive problem-solving efforts (Folkman, 1984). Considering the present results, it appears that the deferring style is the least effective religious coping style because it focuses only on providing a sense of control (e.g., “God is in control”) with little effort from the individual to solve the problems. The deferring style therefore consists of purely emotion-focused coping without problem-focused coping. Conversely, the self-directing style allows the individual to actively attempt to solve problems (e.g., “God gave me the ability to solve my problems”), but does not provide the sense of control that the other coping styles provide. It is therefore pure problem-focused coping with no emotion-focused coping. The more effective collaborative style, on the other hand, allows the
individual to take an active role with God’s help (e.g., “God will help me to solve my problems”), thus allowing the individual to gain a sense of perceived control, and preventing emotions from then interfering with problem solving efforts. Collaborative religious coping is therefore a balance of emotion-focused and problem-focused coping.

The second research question examined whether personality traits or situational variables have greater impact on perceived level of stress. For example, if a person’s personality traits consist of emotional instability and self-defeating coping strategies (e.g., neuroticism), that person may be more likely to perceive him- or herself as experiencing more stress than someone who is experiencing the same level of situational stressors but who has more stable personality traits or more effective coping patterns. This hypothesis was also confirmed by the results of the present study. Although situational stressors do lead to perceived stress, personality characteristics are far better predictors of the level of perceived stress, regardless of variability in situational stressors.

Considering the findings regarding the relation between neuroticism, perceived stress, and situational stressors, it appears that perceived stress is much more strongly related to neuroticism than to situational stressors. This implies that individuals with more neurotic personality styles will perceive themselves as experiencing higher levels of stress than those who do not have neurotic personality traits when experiencing the same levels of situational stressors. This is also consistent with the literature reviewed above. For example, Young and Martin (1981) demonstrated that individuals high in neuroticism attended to negative information significantly more than those lower in neuroticism. Regarding the present findings, this would suggest that high levels of neurotic traits are
associated with attending to more negative aspects of stressful situations than low levels of neurotic traits, thus leading to higher levels of perceived stress. Furthermore, David and Suls (1999) found that neuroticism has an effect on an individual’s perception of the severity of a stressful event, which may lead them to perceive it as more stressful.

The third research question was in part an exploration of the correspondence of religious and non-religious coping and in part a validity-check of the coping measures used. The religious coping styles were compared with non-religious coping factors to examine their covariation. For example, it was hypothesized that the tendency to relinquish problems to God and make little problem-solving effort (deferring) would be associated with the tendency to distance oneself from one’s problems (distancing) or avoid dealing with one’s problems (escape-avoidance) as measured by the non-religious coping questionnaire. Two of the three religious coping styles and their corresponding non-religious coping factors were found to significantly correlate in the present study. Working together with God was associated with seeking support from others as well as looking at stressful or uncontrollable situations in a more positive light. Also, relinquishing responsibility to God was similarly associated with distancing and avoiding dealing with problems. Working alone with no help from God did not appear to be associated with similar non-religious coping factors, such as accepting responsibility for problems or planning strategies to deal with problems.

The relations between religious coping styles and non-religious coping styles were also largely consistent with the existing literature. The collaborative and deferring styles were both related to corresponding aspects of non-religious coping as predicted.
This was expected considering that the religious coping styles were based in part on the pre-existing coping literature at the time (Lazarus & Folkman, 1984; Pargament, et al., 1988). The self-directing style of religious coping was not strongly related to the corresponding non-religious coping styles. This may have been an artifact of how the measure was developed. Most of the research conducted on religious coping has been done with either clinical samples or church samples, including the religious coping measure used in the present study, which was developed on a sample of 197 church members (Pargament, 1988). For example, the self-directing coping style is the only religious coping style that does not involve active intervention from God. Therefore, if a person is religious, and even if they use more self-directing strategies, he or she may indicate more use of the other strategies on a questionnaire to align with the expectations of a self-described religious person or to follow the theology of their specific religion (e.g., God is involved in all aspects of our lives). They would therefore endorse few responses indicating a self-directing style due to a self-imposed stigma associated with this style, while nevertheless endorsing the corresponding non-religious coping styles that accurately describe their coping patterns. A person exhibiting a lower degree of religiosity might endorse the non-religious coping styles commensurate with the self-directing style, while not highly endorsing any of the religious coping styles. This pattern of response would produce an insignificant or even negative relation between the self-directing style and its corresponding non-religious coping styles, which is what was found in the present study. The other possibility is that there is a distinct difference between the two types of coping, which has been demonstrated by the findings that
religious coping variables can account for outcome effects beyond the effects of non-religious coping (Pargament et al., 1990). For example, this potential difference may be the influence of a belief in a higher power on one’s sense of control, as described above. Furthermore, even the most effective non-religious coping styles are effective to the extent that they provide a sense of empowerment in how one reacts to uncontrollable situation. Religious coping may not only empower an individual to cope with stressors, but also provide a sense of control over an otherwise chaotic situation that non-religious coping strategies simply do not provide. In other words, it provides a sense of control over the uncontrollable stressor itself, not just control over the reactions to the stressor (e.g., the stressor “is all part of God’s plan”).

The fourth research question examined the ability of specific and stable personality traits to predict the use of certain coping styles over others. These hypotheses were based on research indicating that personality traits predict strategy use and that certain personality traits such as neuroticism lead to use of less effective or self-defeating strategies (Prenda & Lachman, 2001; Young & Martin, 1981). It was hypothesized that neurotic personality traits would be associated with the religious coping styles that are associated with higher levels of depression, such as relinquishing all control to God; whereas neuroticism would be negatively associated with the use of the religious coping styles associated with lower levels of depression such as working together with God. These hypotheses were not confirmed by the present study. In fact, the specific personality trait of neuroticism was not associated with the use of any religious coping style, which indicates that neuroticism may not have any influence on the religious
coping styles a person may use when faced with a stressful encounter. However, it should be noted that among those in the Spiritual group and Nondenominational Christian group, neurotic personality styles did predict the style of religious coping used. Specifically, in the Non-denominational subset, neuroticism was negatively associated with the collaborative religious coping style, as predicted. In the Spiritual subset, neuroticism was positively associated with the use of the deferring coping style, as predicted. One possible explanation of these findings is that individuals in these groups may be more prone to use one specific religious coping style over the others. For example, those who consider themselves to be Spiritual, but not religious may believe in some form of a higher being, but they may be unsure as to what the higher being is or have few specific beliefs regarding how it may intervene in their lives. Therefore, they may be likely to utilize the self-directing coping style for purposes of coping except in dire circumstances as a “last resort,” in which case they may use one of the other religious coping styles in response to a highly uncontrollable situation. Given the inability to distinguish neuroticism from perceived stress, in this scenario the dire circumstance implies high perceived stress, and consequently higher levels of neuroticism, thus inflating the apparent relation between neuroticism and certain coping styles. This interpretation may also explain why among the third religious subset analyzed, Baptists, the findings were consistent with the overall sample. To further explore this notion, three one-way ANOVAs were performed to test the differences between each of the three religious coping styles against religious group membership reported on the demographics questionnaire. All three ANOVAs were significant at $p < .001$, with the spiritual, but not religious subset consistently showing
significantly different usage of coping styles than the remaining religious subsets.

Specifically, persons in the *spiritual, but not religious* subset scored significantly higher than non-denominational Christians or Baptists in the use of the self-directing style and significantly lower in the use of the collaborative and deferring styles. To further explore this interpretation, each of the religious coping styles was correlated with life stress for each of the three primary religious subsets. These analyses indicated that among the spiritual but not religious, life stress was significantly negatively correlated with self-directing and positively significantly correlated with collaborative. This is contrary to the relation indicated by the ANOVA, which did not take life stressors into account. Among nondenominational Christians, the collaborative and deferring styles were positively correlated with life stress, but self-directing was not. Among Baptists, no coping style was correlated with life stress. Therefore, although this analysis is cross-sectional in nature, it supports the notion that life stress is associated with the use of certain religious coping styles over others, but this association is also influenced by other factors such as religious group membership. Although this does not necessarily prove the specific interpretation outlined above, it does support the notion that members of different religious groups are prone to use different styles of religious coping, even if coping styles also differ as a function of life stressors.

As previously mentioned, neuroticism was not associated with any of the three religious coping styles for the overall sample. Although this finding is not consistent with the relations hypothesized, it is not entirely inconsistent with the literature reviewed. Little work has been done examining the relations between personality styles and coping,
and what does exist has been conducted with almost exclusively non-religious styles of coping. Few studies have examined the relation between neuroticism and religious coping. The relations hypothesized were based largely on the research examining neuroticism and non-religious coping as well as the theoretical similarities between religious and non-religious forms of coping, discussed above. Among the few studies examining neuroticism and religious coping, David and Suls (1999) found that neuroticism was indeed related to use of religious coping, and that it moderated the relation between problem severity and religious coping. Specifically, they found that among individuals high in neuroticism, problem severity did not affect the use of religious coping, whereas among individuals low in neuroticism, increased problem severity led to increased use of religious coping. Although broadly consistent with the current findings, the authors of that study did not examine relations between neuroticism and specific types of religious coping. For example, individuals high in neuroticism may not have used religious coping as much as individuals low in neuroticism, or the lack of religious coping among those high in neuroticism may have been the result of an overall inability to cope. Alternatively, individuals high in neuroticism may have used less effective religious coping styles than individuals low in neuroticism.

Although neuroticism was not related to religious coping in the current study, exploratory analyses found other personality factors that related to religious coping styles. Exploratory analyses beyond the hypothesized relations were conducted with the remaining four personality factors of extraversion, openness, agreeableness, and conscientiousness. Extraverted, agreeable, and conscientious personality traits were more
associated with working together with God when solving problems (collaborative) or relinquishing all control to God (deferring). These traits were negatively associated with relying on one’s own abilities to solve problems (self-directing). Personality traits that are more open to experience were negatively associated with working together with God or relinquishing all control, and positively associated with using their own abilities to solve problems. These findings indicate alternative relations between personality and religious coping. For example, perhaps personality factors are related to religious upbringing. Alternatively, it could be that individuals with certain personality styles are more prone to adhere to the traditional religious faiths of their families of origin. For example, those with agreeable and conscientious personality traits may be more likely to adhere to their traditional religious faith and less likely to question their beliefs, thus leading to a greater degree of religiosity and greater use of coping styles relying on help from God. Those with personality styles more open to new experiences may be more likely to question their faith, explore alternative faiths, and rely less on their traditional religion when coping with problems, thus leading to a more self-directed coping style.

As an additional analysis, qualitative ratings were conducted on answers to an open-ended question regarding the use of religion in coping with life stressors. Several themes were identified and compared to the major study variables obtained through questionnaires. The findings of the qualitative analysis indicate adequate convergent validity in other study measures, particularly the religious coping measure. Specifically, when analyzed with other measures, the religious coping scales demonstrated a pattern of the self-directing style operating in a fashion contrary to the collaborative and deferring
styles. For example, when comparing religious coping styles with personality factors, the self-directing style consistently and significantly demonstrated an opposite relation to personality factors than the relations demonstrated by the collaborative and deferring styles. This consistency in findings among both qualitative and quantitative measures adds further evidence of the validity of the religious coping measure used, and provides further support of the patterns found in relations among religious coping styles and personality factors.

Considerable differences were noted on the study findings among subsets of the sample. These differences were found in comparisons of different religious subsets and in comparisons of Caucasians and non-Caucasians. Several explanations may provide insight into these discrepancies. For example, regarding the differences between religious subgroupings, many of the differences in the relations of neuroticism, perceived stress, and religious coping may be attributable to the differences in theology or lack of theology outlined above. Regarding the differences among racial groups, the differences regarding the relation between neuroticism and perceived stress may be two-fold in nature. Specifically, members of marginalized groups may be subject to higher levels of daily stressors resulting from discrimination and alienation experienced simply by living in a Caucasian-dominated society, which may in turn serve as a “stress inoculation,” resulting in other non-race related daily stressors being perceived as less stressful, thus lowering perceived stress as measured by the PSS. Secondly, on similar theoretical grounds, members of these groups may have greater experience in dealing with higher levels of stress and therefore have had the opportunity to experiment, practice, and implement
more effective coping techniques resulting in lower levels of perceived stress. However,
$t$-tests comparing mean levels of perceived stress among racial groups did not indicate a
significant difference. Yet another explanation may be that members of marginalized
groups may be less willing to disclose indications of vulnerabilities to a Caucasian
experimenter in a predominantly Caucasian university. Another possibility is that the
small size of the non-Caucasian sample resulted in a lack of power in the statistical
analyses. As can be seen in Table 7, the variance accounted for in each hypothesis was
similar across the subgroups. Despite this similarity, the findings were not significant for
some of the subgroups, indicating that the relations are similarly applicable to the
subgroups but that the sample sizes of the subgroups were not comparable to the overall
sample size. Lastly, these group discrepancies may also have been attributable to
religious differences, to be described later.

Clinical Implications

The findings of the present study have numerous implications for clinicians to
consider when working with clients in both diagnostic and therapeutic settings. First of
all, the current results imply that despite the growing secularization of society, a
considerably large majority of the population continues to endorse some form of religious
belief in a higher power, even if they do not adhere to a specific theology. The influence
of religious beliefs on clients’ decision-making strategies and subsequent pathology is
often ignored or understated. The current study should be viewed as an indication that,
although often overlooked and underused as a factor for positive growth, religion can be
particularly useful when dealing with daily stressors or even trauma (Decker, 1993).
Another implication for clinicians to consider is the intertwined nature of neuroticism and perceived stress. This is important to consider in therapeutic and diagnostic situations because symptoms common to prevalent pathologies such as depression or personality disorders may often be a product of the situational stressors in the client’s life at the time of the assessment or intervention. The findings of the present study serve as a reminder that a thorough, comprehensive psychological evaluation should inquire into personal perception of stressors and take into account the client’s environment before drawing diagnostic conclusions. This might be particularly problematic due to the pressures of managed care; misdiagnosis or over-pathologization risks tagging clients with inaccurate labels that may remain with them for the rest of their lives.

Another important consideration is the discrepant findings among various subsets of the sample. For example, different results were found for Caucasians and other racial/ethnic groups, and for different religious groups. This provides further evidence in support of the growing body of multiculturalism literature that has consistently shown that many of our diagnostic categories and assessment tools have been developed in predominantly Caucasian samples and under a Judeo-Christian framework, and that they therefore may be less accurate when applied to members of other marginalized groups. Furthermore, as described above, differences in the religious subsets may have been attributable to different theologies, or the lack of a theological framework. This may also explain differences between Caucasians and non-Caucasians. For example, individuals coming from Hispanic cultures predominantly follow Roman Catholic traditions, whereas
in this particular sample Caucasians were predominantly Protestant. These traditions may have a differing understanding of the use of religion to cope with everyday stressors. Similar differences may exist among Eastern traditions as well. These religious differences may have clouded racial differences in the present study. Furthermore, t-tests comparing mean difference of Caucasians and non-Caucasians on religious coping were significantly different, with non-Caucasians appearing to make greater use of religious coping. Therefore, clinicians should be aware of not only if religion plays an important role in a client’s life, but also how religion impacts the client.

Research Implications

Previous research has found that religious coping styles moderate the relationship between perceived stress and resulting depression. Bickel et al. (1998) found that the ability of religious coping styles to predict depression was only applicable to those experiencing high levels of perceived stress. They noted that neuroticism might act as a confounding variable in the relations between stress, coping, and depression, but also noted that this was not likely due to the lack of findings among participants with low perceived stress levels. The current study proposes that a lack of findings among participants with low stress does not preclude the influence of personality variables on coping styles. Instead, those experiencing low levels of stress may have little current need to implement any coping style. This does not discount the importance of situational influences because the same participants who currently are not experiencing stress may at some other time invoke a characteristic coping style when they do experience situational stressors. The theoretical model proposed in the present study suggests that this does not
preclude the neuroticism explanation, however, because those high in neuroticism are
more likely to endorse higher levels of stress and higher levels of depression. Therefore,
in previous research participants exhibiting high levels of neuroticism may have been
subsumed under the high stress condition. For this reason, the current study included
measures of both perceived stress and personality factors to examine their respective
relations with religious coping and depression.

The inability of neuroticism to predict use of religious coping styles can be
interpreted in several ways. One interpretation of this finding implies that the theoretical
model proposed in the present study is in fact confirmed, but in a different way than
originally proposed. For example, the assumption underlying the current model is that
one aspect of neuroticism is use of ineffective or self-defeating coping strategies. It was
therefore hypothesized that neuroticism would be associated with the religious coping
styles that have been found to be less effective. Contrary to this hypothesis, neuroticism
did not predict the use of any coping style. However, as noted in the findings of the
exploratory analyses, all four of the other personality factors measured did predict use of
coping styles. Therefore, perhaps neuroticism does not predict ineffective coping
strategies, but rather the use of few or no strategies at all. The notion of neuroticism being
associated with an inability to cope would explain the findings that neuroticism was
associated with higher levels of perceived stress even when accounting for the level of
situational stressors. Such a coping deficit would also explain the common finding that
high levels of neuroticism are associated with higher levels of depression. Essentially, if
an individual with neurotic personality traits were unable to cope, common levels of
situational stressors would seem more overwhelming, and would be more likely to lead to higher levels of depressive affect.

Neuroticism as a construct may be poorly defined and may in fact be measuring the same construct as perceived stress. For example, in the present study, neuroticism accounted for almost all of the variance in predicting perceived stress, and predicted perceived stress far better than situational stressors. Even when situational stressors were removed, neuroticism consistently predicted almost all of the variance in perceived stress. Thus, future research needs to investigate the relation between neuroticism and perceived stress in a manner that can disentangle the direction of influence. Research should examine the similarities and differences between these two constructs and determine if “neuroticism” can be a temporary state resulting from situational stressors and/or if “perceived stress” might be a personality-based disposition. A possible investigation into this inquiry might be a longitudinal study in which participants are repeatedly given a measure of situational stressors over time and simultaneously administered measures of personality traits and perceived stress. If perceived stress and situational stressors remain consistently related and vary in conjunction, while the personality measure (specifically neuroticism) remains stable over time despite fluctuations in the perceived stress and situational measures, this would indicate neuroticism is a more stable trait. If, on the other hand, perceived stress and neuroticism consistently covary irrespective of fluctuations in situational stressors, this would imply that neuroticism is in fact indistinguishable from perceived stress.
A replication of the current study may also yield additional significant findings if conducted on a more homogenous sample, particularly a self-described religious sample. Much of the previous research conducted on religious coping has been done with church samples. Therefore, a more religious sample may demonstrate a larger effect size in both the implementation and effectiveness of religious coping. The heterogeneous sample drawn from a secular institution for the present study may have consisted of individuals who use little or no religious coping when dealing with problems, thus proving difficult to find significant relations between religious coping and personality. A sample of individuals exhibiting higher degrees of religiosity may demonstrate relations between coping and personality that exist almost exclusively among those who describe themselves as religious. Although replication of this type may be less generalizable to the general population, it would be more applicable to the existing religious coping literature.

Limitations

Several limitations should be taken into consideration when interpreting the results of the present study. For example, the sample used was limited in several ways. As mentioned above, much of the research done in the field of religious coping is conducted with samples taken from church settings, which may be homogeneous in nature. Therefore, a sample of undergraduate psychology students was used to allow both for ready accessibility and therefore a large sample, as well as for a more diverse sample better representing the general population. A disadvantage of this strategy is that this sample consisted of a large number of participants who were either not religious or did not follow a specific theology. For example, two of the three most represented groups in
the sample were spiritual but not religious and nondenominational Christian.

Conversely, a less religious sample may be less apt to implement religious coping styles in times of stress, or may be unfamiliar with the religious terminology used in the measures (such as the notion of “working with God”), either of which may have reduced the effect size thus resulting in a lack of additional significant findings.

Another consideration regarding the sample used is the lack of representation of certain groups. Although the sample was likely more diverse than many samples drawn from church settings, and although the percentages of each racial/ethnic group closely resembled the population of the United States, some groups were under-represented. In particular, Hispanics composed only 8.4 percent of the sample, an under-representation of the percentage of Hispanics in the general population. The sample also exhibited limited range in participant age, with over 90% of the participants falling between the ages of 18 and 24, reflecting the typical college population, but not the general population.

Similarly, over 94% of the sample reported having never been married, which may affect the outcome of some measures. For example, the SRRS lists 43 stressful events which participants are to endorse as having experienced or not during the previous year. These events are then weighted, using marriage as an arbitrary reference point. However, the effect of the majority of the sample not having been married was likely minimal in terms of statistical effect; whatever variance may have been accounted for by marriage was also likely accounted for by the age of the participants, which was factored into all of the hypothesized relations.
Other limitations to consider include the measures used in the present study. For example, the NEO-FFI was used as a measure of personality factors, whereas a longer but more psychometrically sound measure of the same personality constructs, such as the NEO-PI may have been more sensitive in detecting certain personality characteristics or more reliable in distinguishing differing personality styles. Also, the non-religious coping questionnaire that was used to compare non-religious and religious coping was intended to measure how individuals cope with a specific instance, not stable coping styles. This may explain the lack of findings of commensurate non-religious coping styles with the self-directing style of religious coping. Furthermore, many of the measures used in the current study were developed on samples drawn from predominantly Caucasian populations. This may explain the discrepant (mostly lacking) findings for non-Caucasian groups. Future research should develop new measures or use pre-existing measures validated on marginalized groups to increase the sensitivity of the measures among non-Caucasians.

Conclusions

The findings presented above lead to several conclusions that should be considered for future research, theory, and clinical practice. For example, over 83% of the sample endorsed one of the religions listed on the demographics questionnaire, and many of the large number of participants who endorsed the “other” option were likely members of religions not listed. This implies that even in a sample that was not derived from a self-described religious population in a church setting, a large majority nevertheless believe in some form of a higher being, and that religion plays at least some
role in most people’s lives. This is of particular importance given that psychology as a field largely ignores religion as an influence in our clients’ lives. Effective forms of religious coping can be used as powerful tools in the treatment of psychopathology.

The findings of the present study also indicate that personality factors have an impact on the way that people handle stressors that they experience in their day-to-day lives. Four of the five examined personality factors successfully predicted the type of coping used, and this information may prove useful in predicting depression as well as provide a possible means of preventing it by cutting short the process of maladaptive coping by teaching more effective, assertive coping methods. For example, future research may show that measures of personality styles can consistently predict coping styles, which can then be implemented to clinical practice. In such a scenario a client may be administered a personality questionnaire to predict which type of coping he or she is more likely to implement, and then the client may be taught more effective coping strategies in a preventative fashion before a stressful encounter. This would undoubtedly prove more effective than waiting until the client experiences a stressful event to discover that he or she uses maladaptive coping strategies, and only then to try to teach new coping strategies while simultaneously dealing with the repercussions of the event.

Of particular theoretical relevance, one of the five personality factors (neuroticism) consistently not associated with coping styles whereas the remaining four were as consistent in successfully being predict by coping. Furthermore, neuroticism and perceived stress shared such a large amount of variance that they were tantamount to being redundant. This may be an artifact of inaccuracies or other flaws within the
measures used, or this finding may imply that the concept of neuroticism may be a less stable concept than was once thought. In either case, future research is needed to explore these findings further.
Table 1

*Questionnaire Scores Across Gender*

<table>
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<tr>
<th>Survey/Scale</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
<th>Males</th>
<th>Females</th>
<th>Totals</th>
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<td>PSS</td>
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<td>25.89</td>
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<td>7.05</td>
<td>7.78</td>
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<td>288.57</td>
<td>105.54</td>
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<td>1.92</td>
<td>.85</td>
<td>.90</td>
<td>.89</td>
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<td>2.79</td>
<td>1.30</td>
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<td>1.29</td>
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<td>3.77</td>
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<td>3.69</td>
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<td>4.13</td>
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<td>27.98</td>
<td>25.95</td>
<td>26.92</td>
<td>5.75</td>
<td>6.52</td>
<td>6.23</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>29.25</td>
<td>32.19</td>
<td>30.79</td>
<td>6.00</td>
<td>5.51</td>
<td>5.92</td>
</tr>
<tr>
<td>Conscientious</td>
<td>30.62</td>
<td>31.42</td>
<td>31.04</td>
<td>7.86</td>
<td>7.04</td>
<td>7.44</td>
</tr>
<tr>
<td>CESD</td>
<td>14.79</td>
<td>7.32</td>
<td>16.11</td>
<td>9.98</td>
<td>9.96</td>
<td>10.03</td>
</tr>
</tbody>
</table>
Table 2

*Correlation and Regression Coefficients for Religious Coping Styles and Depression*

<table>
<thead>
<tr>
<th>Controls</th>
<th>Predictors</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Education</td>
<td>Depression</td>
</tr>
<tr>
<td></td>
<td>Collaborative</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.516**</td>
<td>-.151*</td>
</tr>
<tr>
<td>Edu</td>
<td>.074</td>
<td>-.156*</td>
</tr>
<tr>
<td>Coll</td>
<td>-.83**</td>
<td>.002</td>
</tr>
<tr>
<td>SD</td>
<td>-.71**</td>
<td>-.062</td>
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<tr>
<td>Def</td>
<td>.102</td>
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<table>
<thead>
<tr>
<th>Overall Model Betas/p-values</th>
<th>R²(df)/p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.08/.16 -.10/.10</td>
<td>-.280/.02</td>
</tr>
<tr>
<td>-.183/.06 .197/.03</td>
<td>.061/215/.03</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Regression Models, R² Change Values/ p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>C .001/.34 C .001/.34 D .012/.05 D .012/.05</td>
</tr>
<tr>
<td>SD .008/.09 SD .008/.09</td>
</tr>
<tr>
<td>D .015/.03 SD .019/.02 C .008/.09 SD .000/.39</td>
</tr>
<tr>
<td>C .007/.10 D .004/.17</td>
</tr>
<tr>
<td>D .015/.03 SD .01/.06 C .018/.02 D .015/.03</td>
</tr>
<tr>
<td>C .018/.02</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01
Table 3

*Correlation and Regression Coefficients for Neuroticism and Stress*

<table>
<thead>
<tr>
<th>Controls</th>
<th>Predictors</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
<td>Education</td>
</tr>
<tr>
<td>Age</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Edu</td>
<td>--</td>
<td>-.138*</td>
</tr>
<tr>
<td>N</td>
<td>--</td>
<td>.174**</td>
</tr>
<tr>
<td>SRRS</td>
<td>--</td>
<td></td>
</tr>
</tbody>
</table>

*Overall Model Betas/p-values*

<table>
<thead>
<tr>
<th></th>
<th>$R^2$</th>
<th>df</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age/Edu.</td>
<td>.039</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>SRRS</td>
<td>.059</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>.463</td>
<td>&lt;.001</td>
<td></td>
</tr>
</tbody>
</table>

*Regression Models, $R^2$ ChangeValues/ p-values*

<table>
<thead>
<tr>
<th></th>
<th>$R^2$</th>
<th>df</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age/Edu.</td>
<td>.039</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>SRRS</td>
<td>.057</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>.507</td>
<td>&lt;.001</td>
<td></td>
</tr>
</tbody>
</table>

*Overall Model Betas/p-values*

<table>
<thead>
<tr>
<th></th>
<th>R²</th>
<th>df</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age/Edu.</td>
<td>.039</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>SRRS</td>
<td>.057</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>.507</td>
<td>&lt;.001</td>
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</tr>
</tbody>
</table>

*p < .05, **p < .01
Table 4

*Correlation Coefficients for Religious and Non-religious Coping*

<table>
<thead>
<tr>
<th>Coping Style</th>
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<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 4 ( (n = 226) )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Collaborative</td>
<td>--</td>
<td>.291**</td>
<td>.441**</td>
</tr>
<tr>
<td>2. Seek Support</td>
<td>--</td>
<td>.490**</td>
<td></td>
</tr>
<tr>
<td>3. Positive Reappraisal</td>
<td>--</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 5 ( (n = 226) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Self Directing</td>
<td>--</td>
<td>-.112</td>
<td>-.039</td>
<td>-.022</td>
</tr>
<tr>
<td>2. Self Controlling</td>
<td>--</td>
<td>.384**</td>
<td>.327**</td>
<td></td>
</tr>
<tr>
<td>3. Accept Responsibility</td>
<td>--</td>
<td>.340**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Planful Problem Solving</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 6 ( (n = 226) )</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Defer</td>
<td>--</td>
<td>.231**</td>
<td>.212**</td>
</tr>
<tr>
<td>2. Distancing</td>
<td>--</td>
<td></td>
<td>.316**</td>
</tr>
<tr>
<td>3. Escape Avoidance</td>
<td>--</td>
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</tr>
</tbody>
</table>

\( **p < .001 \)
Table 5

*Correlation and Regression Coefficients for Neuroticism and Coping Styles*

<table>
<thead>
<tr>
<th>Controls</th>
<th>Predictors</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-- .516**</td>
<td>-.195** -.053 .036 .082 -.114*</td>
</tr>
<tr>
<td>Edu</td>
<td>-- -.116*</td>
<td>.052 .021 .074 -.138*</td>
</tr>
<tr>
<td>PSS</td>
<td>-- 124</td>
<td>.03 .01 .73**</td>
</tr>
<tr>
<td>SS</td>
<td>-- .490**</td>
<td>.291**</td>
</tr>
<tr>
<td>PR</td>
<td>-- .441**</td>
<td>.035</td>
</tr>
<tr>
<td>Coll</td>
<td>--</td>
<td>-.031</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Model Betas/p-values</th>
<th>$R^2/df/p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>.08/.08 -.09/.04 .73/.001 .01/.43 -.001/.50 -.04/.24</td>
<td>.54/216/.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regression Models, $R^2$ change values/p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age/Edu .02/.04 Age/Edu .02/.04</td>
</tr>
<tr>
<td>PSS .52/&lt;.001 PSS .52/&lt;.001</td>
</tr>
<tr>
<td>Coll .001/.23 SS/PR .000/.48</td>
</tr>
<tr>
<td>SS/PR .000/.49 Coll .001/.24</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01*
Table 6

*Correlation and Regression Coefficients for Neuroticism and Coping Styles*

<table>
<thead>
<tr>
<th>Controls</th>
<th>Predictors</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Education</td>
<td>PSS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distance</td>
</tr>
<tr>
<td>Age</td>
<td>--</td>
<td>.516**</td>
</tr>
<tr>
<td>Edu</td>
<td>--</td>
<td>-.121*</td>
</tr>
<tr>
<td>PSS</td>
<td></td>
<td>--</td>
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<td>Dis</td>
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<td>.332**</td>
</tr>
<tr>
<td>E/A</td>
<td></td>
<td>.21**</td>
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<tr>
<td>Defer</td>
<td></td>
<td>-.07</td>
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</tbody>
</table>

Overall Model Betas/p-values

<table>
<thead>
<tr>
<th>R²/df/p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>.08/.05</td>
</tr>
<tr>
<td>-.07/.07</td>
</tr>
<tr>
<td>.63/.&lt;.001</td>
</tr>
<tr>
<td>-.106/.03</td>
</tr>
<tr>
<td>.24/.&lt;.001</td>
</tr>
<tr>
<td>-.02/.70</td>
</tr>
<tr>
<td>.58/216/.&lt;.001</td>
</tr>
</tbody>
</table>

Regression Models, R² change values/p-values

<table>
<thead>
<tr>
<th>Age/Edu</th>
<th>PSS</th>
<th>Defer</th>
<th>Dis/EA</th>
<th>Defer</th>
</tr>
</thead>
<tbody>
<tr>
<td>.02/.04</td>
<td>.52/.&lt;.001</td>
<td>.000//.48</td>
<td>.042/.&lt;.001</td>
<td>.000/.71</td>
</tr>
</tbody>
</table>

* *p < .05, **p < .01*
Table 7

*Table of Alternative Hypotheses and Effect Sizes for Supplementary Analyses on Hypotheses 1-8*

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>Male</th>
<th>Female</th>
<th>Caucasian</th>
<th>Non-Cauc.</th>
<th>Baptist</th>
<th>Non-den.</th>
<th>Spiritual</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁*</td>
<td>S (.06)</td>
<td>S (.08)</td>
<td>S (.14)</td>
<td>S (.08)</td>
<td>NS (.09)</td>
<td>NS (.09)</td>
<td>S (.18)</td>
<td>NS (.10)</td>
</tr>
<tr>
<td>H₂*</td>
<td>S (.06)</td>
<td>S (.08)</td>
<td>S (.14)</td>
<td>S (.08)</td>
<td>NS (.09)</td>
<td>S (.09)</td>
<td>NS (.18)</td>
<td>NS (.10)</td>
</tr>
<tr>
<td>H₃*</td>
<td>S (.56)</td>
<td>S (.67)</td>
<td>S (.44)</td>
<td>S (.56)</td>
<td>NS (.59)</td>
<td>NS (.72)</td>
<td>NS (.54)</td>
<td>NS (.54)</td>
</tr>
<tr>
<td>H₄**</td>
<td>S (.08)</td>
<td>S (.09)</td>
<td>S (.04)</td>
<td>S (.07)</td>
<td>S (.12)</td>
<td>S (.16)</td>
<td>NS (.04)</td>
<td>NS (.03)</td>
</tr>
<tr>
<td>H₅**</td>
<td>NS (.01)</td>
<td>NS (.02)</td>
<td>NS (.004)</td>
<td>NS (.005)</td>
<td>NS (.006)</td>
<td>NS (.004)</td>
<td>NS (.004)</td>
<td>NS (.01)</td>
</tr>
<tr>
<td>H₆**</td>
<td>S (.05)</td>
<td>S (.12)</td>
<td>S (.03)</td>
<td>S (.03)</td>
<td>NS (.08)</td>
<td>NS (.01)</td>
<td>NS (.01)</td>
<td>NS (.04)</td>
</tr>
<tr>
<td>H₇*</td>
<td>NS (.00)</td>
<td>NS (.01)</td>
<td>NS (.01)</td>
<td>NS (.00)</td>
<td>NS (.03)</td>
<td>NS (.02)</td>
<td>S (.08)</td>
<td>NS (.02)</td>
</tr>
<tr>
<td>H₈*</td>
<td>NS (.04)</td>
<td>NS (.03)</td>
<td>NS (.07)</td>
<td>NS (.06)</td>
<td>NS (.06)</td>
<td>NS (.01)</td>
<td>NS (.07)</td>
<td>S (.17)</td>
</tr>
</tbody>
</table>

* R², ** r²

Note: S indicates that the alternative hypothesis was supported for the subsample in question. NS indicates that the alternative hypothesis was not supported.

Note: Hypotheses 4, 5, and 6 were correlational analyses. For ease of readability of the table, only one r² was presented for each of these hypotheses. For hypothesis 4, the relation between Collaborative and Seeking Social Support is presented. For hypothesis 5, the relation between Self Directing and Self Controlling is presented. For hypothesis 6, the relation between Deferring and Distancing is presented.

Note: For Hypotheses 7 and 8, the effect sizes shown do not include the control variables of age, education, and perceived stress. Therefore, the effect sizes shown reflect the ability of religious and non-religious coping variables of interest to predict neuroticism above what is accounted for by the control variables.
Table 8

Regression Betas for Personality Factors and Religious Coping Styles

<table>
<thead>
<tr>
<th>Coping Style</th>
<th>Extraversion</th>
<th>Openness</th>
<th>Agreeableness</th>
<th>Conscientiousness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative</td>
<td>.222**</td>
<td>-.330***</td>
<td>.191*</td>
<td>.145*</td>
</tr>
<tr>
<td>Self-Directing</td>
<td>-.292***</td>
<td>.291***</td>
<td>-.258***</td>
<td>-.149*</td>
</tr>
<tr>
<td>Deferring</td>
<td>.264***</td>
<td>-.324***</td>
<td>.196**</td>
<td>.195**</td>
</tr>
</tbody>
</table>

*p<.05, **p<.01, ***p<.001
APPENDIX A

QUALITATIVE QUESTION INSTRUCTIONS
Please use the space below to describe how you use religion or the concept of a higher being or spirituality to cope with stressors in your life.
APPENDIX B

DESCRIPTION OF STUDY
This study is examining how people deal with stress. Personality factors, coping styles, (e.g., social support seeking, religion, etc.) and stress levels will be assessed using questionnaires.
APPENDIX C

RESEARCH INFORMATION NOTICE
Title of Study: Coping Styles as Mediators of Depression and Perceived Stress

Principal Investigator: Jeremy Crostley

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the proposed procedures. It describes the procedures, benefits, risks, and discomforts of the study. It also describes your right to withdraw from the study at any time.

Participants must be 18 years of age or older to take part in this study.

Purpose of the study and how long it will last:

The purpose of the study is to examine different styles of coping with stress and to measure negative affect resulting from stress. The present study will also examine how personality types affect coping styles and stress. Participation in the study is anticipated to take 30-45 minutes.

Description of the study including the procedures to be used:

The study will include seven questionnaires that will ask about things that happen in your life, how you deal with them, how they make you feel, and your personality. Two course credits will be given for participation.

Description of procedures/elements that may result in discomfort or inconvenience:

The level of discomfort anticipated for this experiment is minimal, such as asking the participant to think of past stressful events. Remembering stressful events can result in problems such as difficulty concentrating or anxiety. If the participant experiences any distress due to this study, you may withdraw from the study immediately. You may also request free counseling services at the UNT Counseling and Testing Center located in the University Union, or counseling services at a reduced fee at the UNT Psychology Clinic located in Terrill Hall.
Description of the procedures/elements that are associated with foreseeable risks:

No foreseeable risks are associated with any element of this study other than those mentioned above.

Benefits to the subjects or others:

No specific benefits are expected to accrue to the participant. The benefits of this study are that effective coping styles will be better understood by professionals so that they may be used to help persons better cope with difficult events in life.

Confidentiality of research records:

All participants' records will be coded and will have no identifying information to ensure anonymity. All records will be kept in a secure location.

Review for protection of participants:

This research study has been reviewed and approved by the UNT Committee for the Protection of Human Subjects (940) 565-3940.

RESEARCH SUBJECTS’ RIGHTS: I have read or have had read to me all of the above.

Jeremy Crostley has explained the study to me and answered all of my questions. I have been told the risks or discomforts and possible benefits of the study.

I understand that I do not have to take part in this study, and my refusal to participate or my decision to withdraw will involve no penalty or loss of rights or benefits.

In case there are problems or questions, I can call Jeremy Crostley or Kenneth Sewell at the University of North Texas Psychology Department at telephone number (940) 565-2671.

I understand my rights as a research subject, and I voluntarily consent to participate in this study. I understand what the study is about and how and why it is being done.

You may keep this document for your records.
APPENDIX D

DEMOGRAPHICS QUESTIONNAIRE
Demographics Questionnaire

Gender: M  F

Age:________

Race/Ethnicity (please circle):  African-American  Caucasian  Hispanic  Asian  Native American

Education Level (please circle):  Freshman  Sophomore  Junior  Senior

Marital Status (please circle):  Never Married  Married  Divorced  Separated  Widowed

Religious Orientation (please circle):  Catholic  Baptist  Methodist  Presbyterian  Lutheran  Christian-nondenominational  Judaism  Islam  Buddhism  Other (specify):___________  Spiritual, but not religious

One of the above questionnaires included a statement regarding the substitution of the word “God” with your own term of choice. If you chose to substitute your own term, what name or word did you use? ____________________________________________
REFERENCE LIST


