Summer 8-2008

Religious Orientation and Religious Coping in Adolescents With and Without a Chronic Illness

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Recommended Citation
Brown, Jacqueline Beine, "Religious Orientation and Religious Coping in Adolescents With and Without a Chronic Illness" (2008). *Dissertations*. 1132.
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The University of Southern Mississippi

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by

Jacqueline Beine Brown

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved:

[redacted]

August 2008

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RELIGIOUS ORIENTATION AND RELIGIOUS COPING IN ADOLESCENTS WITH AND WITHOUT A CHRONIC ILLNESS

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ABSTRACT

RELIGIOUS ORIENTATION AND RELIGIOUS COPING IN ADOLESCENTS WITH AND WITHOUT A CHRONIC ILLNESS

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August 2008

Religion plays an important role in most people's lives and can greatly affect how individuals cope and interpret stressful situations. However, very little is known about how adolescents incorporate religion into their lives (e.g., is it central or peripheral to their lives, do they utilize religious coping). Furthermore, given the additional stressors experienced by adolescents who have a chronic illness, it is likely their religious orientations and religious coping strategies are different from their healthy peers. Thus, the present study was designed to examine the constructs in both typically developing and chronically ill adolescents. Additional constructs of hope, general coping, and quality of life were also included to explore the relationship these constructs have to religious orientation and religious coping.

Participants included 179 adolescents aged 13 to 17 diagnosed with a chronic illness (n = 81) and healthy controls (n = 98). The Chronic Illness group was further subdivided into Sickle Cell Disease (n = 27), Diabetes Mellitus (n = 27), Cancer (n = 21), and Other (n = 6) groups. The majority of participants reported being members of the Christian faith (72%); 58% were female; 62% were African American, and 36% were Caucasian. Participants completed self-report measures for the various constructs and their parents reported demographic and illness-related information. Participants in the healthy group were obtained through undergraduates at a southern university. Participants in the Sickle Cell Disease and Cancer groups were obtained through regularly scheduled clinic appointments; the Diabetes Mellitus group was obtained through mailers from the Diabetes Foundation of Mississippi.

Results indicated that adolescents with a chronic illness report spending more time thinking about their religion relative to healthy controls, report internalizing their religious beliefs more than healthy peers, and report using more religious/spiritual coping than healthy peers. Adolescents' perception of illness severity was not correlated with religious orientation or religious coping. There were no differences between the groups with regard to quest religious orientation. The differences between the various illness groups and exploratory findings regarding hope, quality of life, and general coping are discussed as well as areas for future research.

ACKNOWLEDGMENTS

I would like to take this opportunity to thank all of my committee members, Drs. Sara Jordan, Laura Stoppelbein, Christopher Barry, Tammy Greer, and Jamie Aten. I appreciate the time and thought each of you put into my dissertation. I want to especially thank Laura Stoppelbein, Ph.D. for her enormous assistance with securing a location for much of my data collection and her general uplifting attitude. Data collection would have been much more arduous had I not had Dr. Stoppelbein around to cheer me up every once in a while. Thank you most especially and sincerely to Sara Jordan, Ph.D. for being the chair of my dissertation committee. Dr. Jordan was incredibly thorough, helpful, supportive, and patient both with me and the project. I do not know what I would have done without her assistance and guidance.

I would like to sincerely thank the Diabetes Foundation of Mississippi who graciously allowed me to collect data through their organization. I cannot imagine how difficult data collection would have been without their very kind assistance. I would similarly like to thank the University of Mississippi Medical Center and Dr. Stoppelbein for allowing me to collect data at UMMC. The staff at UMMC was wonderfully kind and supportive. I also want to thank Jill Henderson, Alexis Suozzi, and Michelle Gryczkowski for their help with data collection and general emotional support. I especially thank Alexis for taking those long drives to UMMC!

I could not have done any of this without the constant love and support of my husband, Daniel. He is the most amazing gift God has ever blessed me with. You have my unending gratitude for your extreme patience, love, and support.

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INTRODUCTION

Religion is an important aspect of the culture of the United States. It is estimated that 92% of people in the United States are either sure God exists or believe it is likely (Newport, 2006). Eighty-three percent of Americans report that religion is an important part of their life, and 62% report that they are members of a church or synagogue (Gallup Poll, 2006). Given the central focus of religion in the lives of Americans, it is important to study the impact of religious belief systems. One specific area in which religion is likely to affect a person is through the coping mechanisms they choose to utilize when faced with stressors. For instance, approximately 62% of Americans believe that an answer for all or most of today's problems can be found through religion (Gallup Poll, 2006).

The interaction between religion and coping is complex and varied and, as yet, is not fully understood. As is typical of most areas of study within psychology, less is known about the extent of religious coping within the adolescent population than within the adult population (Cardella & Friedlander, 2004; Pargament, 1997; Pendelton, Cavalli, Pargament, & Nasr, 2002). Being diagnosed with a chronic illness can drastically alter this belief. As a result, adolescents with a chronic illness may differ from healthy adolescents in the extent to which they have considered existential issues and, therefore, may differ in how they incorporate religion into their lives. Adolescents with a chronic illness may have integrated religion more fully into their lives, as reported by their religious orientation, or they may have found that religion is useful in the coping process. Whereas, the healthy adolescents may have yet to experience a reason to seriously contemplate the role religion plays in their lives. Therefore, the current study aims to assess religious orientation and religious coping in a chronically ill and a healthy adolescent population.

Chronic Illness and Adolescence

When individuals are diagnosed with a serious illness they often experience a great deal of distress. In recent years, researchers have focused on posttraumatic stress symptoms (PTSS) and posttraumatic stress disorder (PTSD) as ways to assess just how stressful the experience of a chronic illness is for children and adolescents. For instance, Landolt, Vollrath, Ribi, Gnehm, and Sennhauser (2003) found that of the children (ages 6.5-14.5) they studied, 5.4% of those newly diagnosed with insulin dependent diabetes mellitus and 10% of those newly diagnosed with cancer were found to meet criteria for PTSD. Similarly, Kazak, et al. (2004) found that 17.6% of adolescents (age 11-19) who had survived childhood cancer met criteria for PTSS and 8% met criteria for PTSD.

Adolescents who have a chronic illness have often dealt with concerns that many of their peers have not. An adolescent with a chronic illness may have to cope with stressors such as pain, deteriorating health, invasive medical procedures, and fear of death (Gil, Wilson, & Edens, 1997). Unfortunately, not enough is known about the coping process of adolescents with a chronic illness (Schmidt, Petersen, & Bullinger, 2003). Being diagnosed with a chronic illness in childhood or adolescence is likely changes the way a person views many different aspects of life (Eiser & Berrenberg, 1995). It often changes the way that the adolescent approaches or experiences typical developmental tasks or milestones (Eiser & Berrenberg). The typical adolescent is concerned with asserting his independence, establishing autonomy, and often turns to peers for support; however, the adolescent with a chronic illness often finds that he is forced to remain dependent on his parents for both physical and emotional support (Eiser & Berrenberg).

Due to the all encompassing nature of many chronic illnesses, the role religion plays in a person's life might be an aspect of life that changes with the diagnosis of a chronic illness. One possible reason for this is that being faced with the possibility of dying can accelerate the search for meaning that occurs within typical development (Stuber & Houskamp, 2004). Pargament (1997) suggests that religion becomes more important to those people who better understand the fragility of human life. It is unlikely that few people would be more aware of the limitations of the human condition than those who have had or continue to have a life-threatening illness. The coping process and the developmental process are often viewed as being inter-related or dependent upon each other (Schmidt, Petersen, & Bullinger, 2003). As a result of the seriousness of having a chronic illness, a child's developmental process is likely altered. Therefore, adolescents who must cope with something as serious as a chronic illness may learn to employ different coping mechanisms from those utilized by their healthy peers. For instance, for healthy adolescents, coping strategies are employed to aid in increasing their independence (Schmidt et al., 2003). However, those adolescents with a chronic illness may focus less on gaining independence and more on health-related issues.

Within the fields of psychology and medicine, there is an understanding that the patient's religion can play a role in various aspects of their medical treatment (Josephson & Dell, 2004; Koenig, 2002; Stuber & Houskamp, 2004). For instance, if a patient's religious beliefs clash with medical recommendations; it is possible the patient will not adhere to the recommended treatment (Stuber & Houskamp). Parsons, Cruise, Davenport, and Jones (2006) found that adherence to a medical regimen can be affected by the way a person's religion conceptualizes their illness. For instance, they reported that a person who closely identifies with a religion that stigmatizes those with HIV will be less likely to adhere to the medical regimen for the treatment of HIV. Thus, a person's religious beliefs can play a much greater role in their medical adherence and overall mental health than is typically understood (Koenig, 2002; Parsons et al., 2006). For this and other reasons, consideration of the patient's religious beliefs is important when deciding on the best medical treatment choices.

Religious Orientation

The term "religion," while easily used in the vernacular, is difficult to define for the purposes of scientific exploration (Peet, 2005). Pargament (1997) defines religion as "a process, a search for significance in ways related to the sacred" (p. 32). *Religious orientation* refers to a way to measure the role that religion plays in a person's life (Allport & Ross, 1967; Pargament, 1997). Religious orientation has been defined as "general dispositions to use particular means to attain particular ends in living" (Pargament, p. 59). Religious orientation helps the researcher understand how significant a role religion plays in a person's life. It is not merely a measure of how often a person engages in religious activities. Additionally, religious orientation refers to a general tendency and should be consistent across situations (Pargament, 1997).

Allport and Ross (1967) are credited with being two of the pioneers in the study of religious orientation. This seminal article was directly related to the zeitgeist of the time. During the 1950s and 1960s in the United States, the Civil Rights Movement was coming to the forefront. With this movement came outward displays of prejudice from those opposed to civil rights for African Americans. During this time period, it was observed that those who were opposed to the Civil Rights Movement were also seen as being religious, and those opposed often cited religious reasons for their opposition. This was so often the case, many began to argue that having religious beliefs was positively correlated with being prejudiced (Leong & Zachar, 1990). However, Allport and Ross (1967) noted that many of their predecessors reported a curvilinear relationship between church attendance and prejudice, in that those who attended church one or more times a week were found to be less prejudiced than those who attended less regularly. Allport and Ross believed that in order to fully understand the relationship between religion and prejudice, it would be necessary to more fully understand those who practice religion. Essentially, they believed that there were many different motivations for attending church.

Allport and Ross (1967) separated religious orientation into two theoretical constructs: intrinsic and extrinsic religious orientation. They note that while these are theoretically separated into two distinct religious orientations, most who are religious fall somewhere in between the two on a continuum. Allport and Ross believed that those with an extrinsic religious orientation "used" their religion, whereas those with an intrinsic religious orientation "lived" their religion. In other words, Allport and Ross believed that those who have an extrinsic religious orientation see religion as a sort of means to an end. Religion in itself is not the end goal; rather it is a way to gain something else. They may perhaps enjoy the social aspects of attending their religious services or they may pray to God to obtain some goal (e.g., health, happiness, wealth). Allport and Ross state that, "in theological terms, the extrinsic type turns to God, but without turning away from self" (1967, p. 434). Conversely, for those who have an intrinsic religious orientation, fully internalizing their religion is the end goal. Their goal in participating in religious activities is to fully experience the religious activity. According to Allport and Ross, those of the intrinsic type try to fully "follow" and "internalize" their religious beliefs. Essentially, their religious beliefs act as a lens through which they view the world. Based on these theoretical categories, Allport and Ross believed that those who were higher on extrinsic religious orientation would be more likely to display prejudicial attitudes than would those who were higher on intrinsic religious orientation.

To test this theory, Allport and Ross created the Religious Orientation scale (RO scale; 1967). This original scale was divided into two subscales (Intrinsic and Extrinsic). They also looked at those participants who responded in such a way that they described as Indiscriminately Proreligious (those who scored high on both subscales but higher on extrinsic). Allport and Ross found that that those who scored Indiscriminately Proreligious on the RO scale also rated highest on measures for indirect and direct prejudices, the Extrinsic type rated second highest, and the Intrinsic type rated least prejudiced. They took these results to indicate that being religious does not, in and of itself, correlate with prejudice. Instead they noted that religious orientation plays an important role in better understanding this relationship. This concept of religious orientation has led to and continues to generate a great deal of research in the area of psychology and religion (Kirkpatrick & Hood, 1990).

Gorsuch and Venable (1983) later revised the original RO scale to make it more appropriate for use with both children and adults. The result was the Age Universal I-E

Scale (Gorsuch & Venable). It was then revised a second time and named the Intrinsic/Extrinsic-Revised scale (Gorsuch & McPherson, 1989). Both revisions contain two primary subscales Intrinsic and Extrinsic and have two secondary subscales Extrinsic Social and Extrinsic Personal (Gorsuch & McPherson; Leong & Zachar, 1990; Maltby & Lewis, 1996; Maltby, 1999). Rating high on the Extrinsic Social subscale implies that the person sees religion as a way to obtain social gains (Maltby). An example of an item from this factor is, "I go to church mostly to spend time with my friends." By Extrinsic Personal it is meant that the person gains comfort from religion (Maltby). An example of an item from this factor is, "I pray mainly to gain relief and protection."

Nearly one decade after Allport and Ross' (1967) original article, Batson (1976) proposed a third type of religious orientation, quest religious orientation. Batson defined those who subscribe to a quest religious orientation as those who "view religion as an endless process of probing and questioning generated by the tensions, contradictions, and tragedies in their own lives and in society" (p. 32). Batson and Schoenrade (1991a) further stated that someone who is of the quest orientation faces existential questions and refuses to accept "clear-cut, pat answers" (p.417). Although, intrinsic and extrinsic religious orientations can both be adaptive ways of incorporating religion into one's life, Batson and Raynor-Prince (1983) suggested that a quest religious orientation may actually be a more "psychologically adaptive approach to religion" (p. 49).

Research has shown that quest, intrinsic, and extrinsic are each independent forms of religious orientation (Batson & Raynor-Prince, 1983). Batson and Schoenrade (1991a) reported that based on more than 50 studies they reviewed; the Quest Scale has demonstrated a low correlation with the other two scales (.00 to .25 for Intrinsic and -.10

to .10 for Extrinsic). They further reported that based on numerous prior studies, those individuals who are considered religious (e.g., seminary students) rate higher on the Quest Scale than do others who are not considered religious. Thus, Batson and Schoenrade concluded that the Quest Scale is both a measure of religious orientation and an independent dimension from both the intrinsic and extrinsic religious orientations.

Coping and Chronic Illness

Coping has been defined as "thoughts and behaviors that people use to manage the internal and external demands of situations that are appraised as stressful" (Folkman & Lazarus, 1980). Something unique to coping is that every action or inaction in response to a stressor can be conceptualized as a method of coping (Pargament, 1997). Based on this understanding of coping, it becomes highly unlikely that a person will not use some form of coping mechanism with each stressful situation. Choosing to do nothing is, in itself, a coping choice (Pargament). Some common coping strategies used by adolescents when dealing with a chronic illness include: escape/denial/avoidance, aggressive/confrontative, acceptance, problem-solving, wishful thinking, and social support seeking (Petersen, Schmidt, & Bullinger, 2004; Schmidt, Petersen, & Bullinger, 2003).

Folkman and Moskowitz (2004) reported that the process of coping is initiated when an individual feels that something important to them has been threatened, lost, or harmed in some way. The person's interpretation of an event plays a key role in determining whether or not they feel the need to employ coping mechanisms. While different people often interpret the same event very differently, it is widely agreed upon by researchers that being diagnosed with a chronic illness is considered a stressful situation (Kazak et al., 2004; Landolt et al., 2003). Therefore, those adolescents who are dealing with a chronic illness are likely to interpret this as a stressful situation and, as a result, employ some form of coping strategy.

In addition, coping is not believed to be a static process (Compas, Conner-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Folkman & Moskowitz, 2004). Rather, coping is believed to change and evolve with each new stressful situation (Pargament, 1997), particularly during childhood and adolescence (Gil, Wilson, & Edens, 1997). Early in life, our coping methods are more variable and flexible than those used as adults. For instance, Gil et al. (1997) found that over an 18-month period, adults with Sickle Cell Disease utilized the same coping methods repeatedly. However, over the same amount of time, children and adolescents' coping methods were more variable. Perhaps one reason for this instability is because the coping methods employed are often related to prior coping choices, and it is unlikely that the typical child or adolescent has experienced enough stressful situations in their short lives to fully adopt one specific form of coping. Gil et al. emphasized that understanding variability of coping during childhood and adolescence is essential to interventions targeting maladaptive coping. It was reported that adolescents were more likely than younger children to utilize maladaptive coping (i.e., negative thinking and illness focused strategies; Gil et al.). This finding is important because it indicates that maladaptive forms of coping, while not yet completely stable in adolescence, are beginning to take root. For this reason, Gil et al. state that intervening at a young age is important in helping adolescents develop more adaptive coping strategies.

However, what constitutes adaptive coping is defined by a person's culture (Folkman & Moskowitz, 2004). It is a person's culture that dictates what is and is not appropriate behavior. Therefore, it is important to remember that coping does not occur as an isolated process, but rather involves all aspects of a person's life and surroundings. Life experiences greatly affect how a person copes with any given situation. It is likely, therefore, that those diagnosed at a young age with a chronic illness will appraise, respond, and cope with various situations differently than those who have not had such experiences.

Religious Coping

Religious coping has been defined as the "use of cognitive or behavioral techniques, in the face of stressful life events, that arise out of one's religion or spirituality" (Tix & Frazier, 1998, p. 411). Religious or spiritual coping allows the person to attempt to understand a stressful situation through the use of their religious belief system (Gall et al., 2005). For example, a person with certain religious beliefs may view a stressful event as an opportunity to grow in their faith, while another may view it as a punishment from God.

Religious coping is a unique form of coping (Pargament, 1997; Tarakeshwar & Pargament, 2001; Tix & Frazier, 1998). Tix and Frazier conducted a study where they assessed both secular and religious coping in patients who had recently received a kidney transplant. They assessed the patients (n = 159) and their significant others (n = 134) at 3 and 12 months post-transplant. Tix and Frazier reported that the use of religious coping in patients was related to more life satisfaction. Within the significant other group, the use of religious coping was related to less distress and greater life satisfaction. They further reported that religious coping predicted adjustment to common stressful events. Additionally, Tix and Frazier found that the beneficial results associated with religious coping were not simply mediated by forms of coping that are also contained within secular styles of coping (i.e., social support, cognitive restructuring, perceived control of a situation). Perhaps one of the reasons that religious coping is independent from other forms of coping is because religion itself can help add a sense of meaning to a stressful situation (Krause, 1998; Mailick, Holden, Walther, 1994; Pargament, 1997). Being able to find meaning in the face of adversity adds a unique variable to the equation.

A person's coping method is often dependent upon the exact stressor the person is experiencing. For example, Krause (1998) found that in a population of older adults, religious coping was most helpful in coping with stressors that were related to highly valued aspects of their life (e.g., being a parent, grandparent, spouse). Similarly, Pargament noted that people tend to rely on religion more heavily when the situation is more serious, harmful, and threatening (1997). Additionally, the form of coping is also dependent upon the resources that are available to the individual person. For example, Krause reported that religious coping was more likely to be utilized by older adults with limited education. Similarly, Pargament reports that those who have few alternative resources may be more likely to use religious coping. Perhaps this is because religious coping is readily available and accessible to all who wish to employ it (Pargament, 1997). Pargament further reported that those who are more religiously involved and committed are more likely to use religious coping when faced with stressors.

Just as with secular forms of coping, religious coping can take both beneficial and harmful forms (i.e., positive and negative forms; Pargament, 1997; Pargament et al., 2003; Pargament, Smith, Koenig, & Perez, 1998). Pargament reported that when the more harmful forms of religious coping (e.g., belief that event is punishment from God, being angry at God, becoming apathetic towards religion, having strong religious doubts) are employed, a negative outcome is likely to occur. For instance, in a meta-analysis of 40 studies, Pargament (1997) reported that framing a stressful event (e.g., heart transplant, open heart surgery, hospitalization of 6-months or more, being a caregiver to an elderly relative) as being a result of God's will or love was *not* related to poorer outcomes (e.g., feeling abandoned by God or their congregation, negative mood, feeling angry toward God or the church, negative appraisal of the resolution of the event). However, reframing that same stressful event as being the result of a punishment from God, led to a poorer outcome 52% of the time. Furthermore, it has been reported that positive forms of religious coping (e.g., framing the situation as potentially beneficial, seeking support from members of the same faith, collaborating with God to cope with the situation) are associated with more positive overall outcomes. Specifically, it has been found that those who engage in more positive religious coping methods report less psychological distress and more spiritual and psychological growth related to the stressor (Pargament, Smith, Koenig, & Perez, 1998; Tarakeshwar & Pargament, 2001). Pargament et al. (1998) further reported that those who engaged in negative religious coping were found to be higher in depression, had a lower quality of life, and were viewed as being more callous towards others.

Additionally, Tix and Frazier (1998) found that religious belief system (i.e., denomination) also contributes to the impact of religious coping as either helpful or hurtful. They found that in those of the Protestant faith, the use of religious coping in relation to an uncontrollable stressor (i.e., kidney transplant) predicted an increase in life satisfaction. Interestingly, the authors found that the use of religious coping among

Catholics predicted an increase in distress over time. The authors noted uncertainty about the implications of their findings and cautioned against overgeneralization. This level of uncertainty is often found within the field of religious coping, as the field is still in its infancy. As a result, many important questions remain unanswered. One specific area in need of further exploration is how children and adolescents utilize religious coping (Mabe & Josephson, 2004; Pargament, 1997; Pendelton, Cavalli, Pargament, & Nasr, 2002).

Please note that while religious coping was the primary form of coping of interest in this study, there were no religious coping measures available for use with adolescents. Therefore, a measure of spiritual coping was used. As a result the terms religious and spiritual coping are used interchangeably throughout this study.

Religious Orientation and Religious Coping

Understanding the role that religious orientation plays in the coping process allows researchers to have a better conceptualization of what might occur when a person is faced with a stressful situation. Kenneth Pargament, one of the foremost researchers in the areas of religious orientation and religious coping, states that religious orientation indicates how central one's religion/faith is to his or her life. For instance, if the person has an intrinsic religious orientation, then it is believed that her faith is central to who she is. However, if she has an extrinsic religious orientation, then her faith plays a peripheral role in her daily life (Pargament, 1997). Knowing what a person's religious orientation is allows researchers to have a better understanding of what resources the individual has to draw from during stressful life events (e.g., having a chronic illness). Given the significant role that a person's religion can sometimes play in his or her life, it seems apparent that religion can have an effect on both the choice of coping strategies and the extent to which they are utilized. Recent researchers have shown that there appears to be a connection between a person's religious orientation and the coping methods she chooses to employ (Pargament et al., 1992). It is currently believed that religious coping methods might mediate the relationship between religious orientation and outcomes of negative life events (Gall et al., 2005; Pargament et al., 1992; Pargament, 1997). This is one of the main reasons for studying religious orientation and religious coping.

Pargament et al. (1988) identified three religious approaches used to assign control and responsibility within the coping process (i.e., self-directing, deferring, collaborative). A self-directing approach indicates that the person relies on themselves and not on God during the coping process. A deferring approach indicates that the person takes a passive role and gives all control and responsibility to God. In the collaborative approach, the person and God both share in the responsibility. Each of these approaches is subsequently correlated with a religious orientation. Pargament (1997) reported that a quest orientation is associated with self-directing coping, extrinsic orientation is associated with a deferring style, and an intrinsic orientation is associated with a collaborative style (Pargament, 1997). Similarly, upon conducting path analyses, Park and Cohen (1993) found that intrinsic religious orientation was indirectly related to increased personal growth and to decreased dysphoria. These findings lend support to previously held theories that an intrinsic religious orientation may provide a framework for establishing meaning for life events, thereby helping those with this orientation to attribute meaning to negative events (Park, Cohen, & Herb, 1990). A cursory glance at these findings may suggest that intrinsic religious orientation is the most beneficial form of religious orientation. However, the literature contains too many contradictory findings to be able to substantiate such a broad conclusion. For instance, in the same study, Park and Cohen also found that intrinsic religious orientation was directly related to increased event-related distress (1993). Thus, findings from the same study suggest that an intrinsic religious orientation increases personal growth, decreases dysphoria, and increases event-related distress. Clearly, many questions remain within this area of study. Additionally, it is unknown if either the coping response or the religious orientation is a precursor to the other or if they are simply related through some other variable (Pargament et al., 1992).

Despite the overall lack of knowledge about how religious orientation and coping actually affect one another, Pargament (1997) believes that through studying the coping process, researchers will be better able to understand the impact of religious orientation on daily life. Pargament further asserts that adding religion as a portion of the coping equation allows researchers to predict outcomes beyond what can be predicted from solely secular forms of coping.

Religious Coping in Children and Adolescents

Although few studies with children/adolescents have been conducted, it has been theorized that the way a child/adolescent religiously frames a stressful event (e.g., suffering) will have an effect on how he or she copes with that event (Mabe & Josephson, 2004). One study, conducted by Pendelton, Cavalli, Pargament, and Nasr (2002), assessed religious coping in children who have a chronic illness. Pendelton et al. (2002) conducted in-depth interviews with 23 children, ages 5 to 12, that had cystic fibrosis. Their interviews resulted in the classification of 11 religious coping strategies in children: declarative religious/spiritual coping, petitionary religious/spiritual coping, collaborative religious/spiritual coping, belief in God's support, belief in God's intervention, belief that God is irrelevant, spiritual social support, ritual response, benevolent religious/spiritual reappraisal, punishing religious/spiritual reappraisal, discontent with God or congregation. Pendelton et al. further identified three primary differences between the way children and adults use religious/spiritual coping. The first difference is that children use a declarative style of coping, whereby the child asks something of God and expects that their request will be granted. In this form of coping, the child does not acknowledge that God may have a choice in whether or not the request is granted. This form of coping has not been found to exist in adults. A second difference is that children are less likely to use negative forms of religious/spiritual coping (e.g., see an event/illness as a punishment from God). The third finding is that children use less sophisticated religious/spiritual coping strategies than adults. This finding supports religious/spiritual developmental theories, which assert that a child's conceptualization of her faith continues to develop as she ages (Fowler & Dell, 2004).

Based on the findings by Pendelton et al., another study was conducted with children and adolescents who had a chronic illness. Shelton (2004) utilized the findings of Pendelton et al. (2002) to develop a self-report measure of religious coping for use with chronically ill children. This measure assesses children spiritual coping across 8 of the 11 domains suggested by Pendelton et al.: declarative, petitionary, collaborative, belief in God's support, belief in God's intervention, spiritual social support, ritual response, and benevolent reappraisal. This measure was developed by asking 18 protestant seminary students to rate 80 items encompassing the 8 domains of spiritual coping. The seminary students were asked to rate the items for content validity on a 5-point Likert-type scale.

Based on their ratings the three best items for each of the 8 domains were retained. The resulting items were then given to 100 children between the ages of 6 and 16 that were attending a Pediatric Pulmonary Clinic. The results of this study indicated that those who scored high on this measure reported less distress, and were less likely to visit the emergency room due to their illness. Additionally, those children who reported themselves as being a member of the Christian or Jewish faith reported higher levels of spiritual coping than non-religious children. The results of this preliminary study are promising, yet there is still very little research that has been conducted. Subsequently, very little is known about how children with a chronic illness use religious coping.

Hope

Hope in children and adolescents has been defined as “a cognitive set involving the beliefs in one’s capabilities to produce workable routes to goals, as well as the self-related beliefs about initiating and sustaining movement toward those goals” (Snyder et al., 1997, p. 401). In other words, children must have both a pathway to achieving the goal and the ability to initiate and maintain movement toward that goal. A child’s sense of hope appears to be related to his or her parents’ perception of general family functioning, in that children who have lower hope scores tend to have parents with greater dissatisfaction regarding family functioning (Connelly, 2005).This empirical study supports earlier theories postulated by Snyder (2002) which stated that the ability for children to be hopeful is related to family functioning (e.g., neglect and abuse are associated with decreased hopefulness in children). It may be that children need a supportive, well-functioning family to develop a sense of general hopefulness.

The relation of hope to the functioning of children and adolescents with a chronic illness is unclear. It has been demonstrated that children and adolescents with a chronic illness are less hopeful (as measured by the Children's Hope Scale [CHS]) than their non-chronically ill peers (Venning, Eliott, Whitford, & Honnor, 2007). Additionally, those with a congenital chronic illness were more hopeful than those with an acquired chronic illness. Conversely, parents of children/adolescents with an acquired chronic illness were more hopeful than parents of those with a congenital illness (Venning et al., 2007). So it would seem that children find it easier to be hopeful if they have always had an illness; whereas, their parents find it easier if the child was once healthy. The child likely has no frame of reference to fully understand how different he or she is from peers. On the other hand, the parent is more able to fully understand the ramifications of the illness, and it is likely that this understanding can, at times, make it difficult to be hopeful.

Hope (as measured by the CHS) has been shown to be unrelated to parent and child ratings of the child's health related quality of life (as measured by the Pediatric Quality of Life Inventory; Connelly, 2005). However, it has been found to be correlated with a patient's psychological well-being. For instance, one study conducted with pediatric renal and liver transplant recipients found that hope was negatively correlated with anxiety and depression ($r = -.45, p < .01$ and $r = -.47, p < .01$, respectively; Maikranz, Steele, Dreyer, Stratman, & Bovaird, 2007). The same study assessed adherence to medical regimens. It was determined that the relation of hope to adherence is fully mediated by depression (Maikranz et al., 2007). Therefore, depression is also playing a very important role in adherence to medical regimens.

Hope has similar positive effects in adults with a chronic illness. For example, one study found that women who scored higher on hope were more knowledgeable about cancer facts and reported being more likely to engage in preventative cancer activities. It was postulated by the authors that seeking out knowledge about illnesses may be related to high hope and may aid the coping process (Irving, Snyder, & Crowson, 1998). It is also possible that this more active coping style may lend itself to the patient feeling more in control and informed about the illness, thus allowing him or her to be more hopeful about the outcome. Interestingly, hope also appears to help with pain, something that may be particularly applicable to children with Sickle Cell Disease or oncology patients undergoing painful and invasive procedures. It has been shown in a sample of non-chronically ill adults that the participants with higher hope were able to endure more pain during a cold pressor task than those with lower hope scores (Snyder et al., 2005).

There also appears to be an association between religious affiliation and hope. Sethi and Seligman (1994) reported that people who are members of a fundamentalist faith (e.g., Calvinists, Muslims, Orthodox Jews) are significantly more hopeful than those who are considered “moderates” or “liberals”. Similarly, people who are considered liberals report significantly higher levels of hopelessness than fundamentalists. Additionally, fundamentalists are less likely to blame themselves for negative life events (Sethi & Seligman, 1994). It would seem then, that people who are fundamentalist may find their religious beliefs particularly uplifting, allowing them to remain hopeful in difficult situations. A review of the literature failed to find any studies assessing the relationship of hope and religious orientation/coping in adolescents. This is a new area that will be explored in this study.

In summary, hope appears to be positively correlated with a families' overall functioning (Connelly, 2005; Snyder, 2002). Hope is related to adjustment and coping with chronic illness and aides in pain management (Irving et al., 1998; Maikranz et al., 2007; Snyder, et al. 2005; Venning et al., 2007). Hope is also related to a person's religious affiliation/denomination with those belonging to a more fundamentalist faith being more hopeful (Sethi & Seligman, 1994).

Quality of Life

Quality of life (QOL) is an important factor to consider when assessing the well-being of children and adults. Children with a chronic illness often have a lower QOL than children without an illness. For instance, researchers have shown that children with cancer have a lower health-related QOL and general QOL than do their healthy peers (De Bolle, De Clercq, De Fruyt, & Benoit, 2008; Eiser & Morse, 2001). The researchers suggested this may be related, not only to the effects of the illness and the pain that can be associated with it, but also to the invasiveness of some of the procedures, the amount of school missed, and decreased social contact with peers.

Researchers have also found that QOL is related to adherence and control of an illness. For instance, a child/adolescent's asthma-specific emotional QOL is negatively correlated with general asthma control (Okelo et al., 2004). Similarly, children and adolescents with the highest levels of emotional QOL have significantly fewer asthma control problems than do those with the lowest levels of emotional QOL (Okelo et al.). Additionally, children with lower asthma-specific emotional QOL miss more school and have more doctor visits (Okelo et al.). Clearly, emotional QOL is important to assess in children with asthma.

Quality of life can also be a factor in determining when it is appropriate to stop treatment of a terminal illness (Eiser & Morse, 2001). For instance, if a child's QOL is incredibly poor it may be in the best interest of the child to discontinue treatment. This is, of course, a very difficult decision and the parents would want as much information as possible. Having a full understanding of the child's QOL would be imperative information in this instance.

Quality of life has been shown to interact with various other factors such as coping style. For instance, in a study assessing coping and QOL in a pediatric asthma sample, it was shown that avoidant coping styles negatively predict QOL (Marsac, Funk, & Nelson, 2006). In other words, chronically ill children who attempt to avoid their problems, symptoms, or illness are likely to have a poorer QOL than those who do not avoid.

As with many constructs, parent and child reports of the child's QOL do not always match. A review conducted by Eiser and Morse (2001) revealed that agreement between parent and child ratings of child QOL are best regarding physical QOL. This suggests that parents are acceptable sources when measuring more objective forms of QOL, but self-report measures should be utilized when assessing for psychosocial forms of QOL. Another study found that parents and children with cancer have good inter-rater reliability on both the total score and the subscales (i.e., physical, school, social, and emotional functioning) of a pediatric health-related QOL measure (De Bolle et al., 2008). Conversely, parents and healthy children were only correlated on the school functioning subscale (De Bolle et al.). It would seem that parents of children with cancer see their child's QOL much the same way the child views it. This may be due to the parent and child needing to communicate more openly about symptoms related to the illness, and subsequently, the child's QOL. Whereas, parents with healthy children may not have as much immediate need to discuss such things with their child. However, parents and children with an illness do not have a perfect correlation between their responses. For instance, parents whose children have cancer tend to rate their child's QOL as poorer than the child rates it him or herself (De Bolle et al., 2008; Eiser & Morse, 2001). The authors suggested this may be due to the parent better understanding some of the long term consequences of the illness and the required treatment (e.g., infertility, continuing pain and fatigue) whereas the child may be focused only on immediate symptoms such as hair loss and immediate pain. Although it can sometimes be more difficult to obtain QOL self-report ratings from the child, it seems necessary to do so to better understand the child's perception of his or her QOL.

Quality of life is also associated with religion/spirituality and religious coping. A study conducted in adults with advanced cancer found that QOL was positively correlated with positive religious coping (e.g., benevolent religious appraisal; Tarakeshwar et al., 2006). Similarly, negative religious coping (e.g., anger at God) was correlated with poor overall QOL. Negative religious coping was also negatively correlated with psychological and existential QOL; whereas, positive religious coping was positively correlated with existential forms of QOL (Tarakeshwar et al., 2006). Given that this was a correlational study, there is no way to assess causality; however, it is clear that positive religious coping is closely associated with good QOL and negative religious coping is closely associated with poor QOL. Baker (2003) suggests that spirituality is a way people can make sense of their lives and become fully invested and aware in life, and this awareness allows a person to perceive a higher QOL. Therefore, it may be that spirituality is vitally important in the establishment of a positive QOL.

In summary, QOL is important to assess in both healthy and chronically ill children. QOL in children with an illness is lower than healthy children, and among children with an illness, it is lower for those who use avoidant coping strategies (Marsac et al., 2006). As with many constructs, parents and children do not always rate QOL similarly. In general, parents and children have better inter-rater reliability when the child has an illness versus parents and children who do not have an illness (De Bolle et al., 2008). Additionally, the parent and child ratings are most similar when assessing physical QOL (Eiser & Morse, 2001). Therefore, to assess emotional or psychosocial QOL, child self-report ratings should be obtained.

QOL was included in this study because of it's relationships with both general coping and religious coping (Marsac et al., 2006; Tarakeshwar et al., 2006). Prior studies have not assessed QOL and religious orientation and coping in children. Additionally, this study utilized a child self-report measure which allowed for better assessment of the psychosocial aspects of QOL (Eiser & Morse, 2001).

Limitations of Current Body of Literature and Proposed Future Directions

To date, there has been very little research looking at either religious orientation or religious coping within an adolescent population (Pargament, 1997). There have been even fewer studies that have assessed the religious orientation of adolescents with a chronic illness or how they utilize religious coping methods (Mabe & Josephson, 2004; Pargament, 1997; Pendelton, Cavalli, Pargament, & Nasr, 2002), with no studies examining both religious orientation and religious coping concurrently. As a result of this lack of research, it is not known if adolescents coping with a chronic illness utilize different coping mechanisms from their healthy peers (Schmidt, Petersen, & Bullinger, 2003). There is also a lack of research looking at how adolescents utilize religion when coping with either a general stressor or, more specifically, a chronic illness (Cardella & Friedlander, 2004; Mabe & Josephson, 2004; Pargament, 1997; Pendelton et al., 2002). Another limitation that exists within the current literature is that the majority of information that is known about the ways in which adolescents cope with a chronic illness comes from information gathered from their parents (Eiser & Berrenberg, 1995; Schmidt et al., 2003). Parent report is certainly easier to obtain; however, parent reports may lack crucial information needed to adequately understand adolescent coping and quality of life. Specifically, much of what occurs in the coping process has to do with internal thoughts and feelings. Due to the difficulty of others to observe such internal experiences, there are often discrepancies between what is reported by the adolescent about him or herself and what is reported by the parent about the adolescent (De Bolle et al., 2008; Eiser & Berrenberg; Eiser & Morse, 2001).

Pendelton et al. (2002) suggested that future studies of religious coping in a pediatric population need to assess how a child's age, specific illness, severity of illness, religious affiliation, and religious "intensity" affect the child's use of religious coping. Additionally, Cardella and Friedlander (2004) suggested that when conducting studies related to religious coping, a measure of general coping should be included. The following study aims to incorporate each of these suggestions and to assess religious orientation and religious coping within both a chronically ill and a healthy adolescent sample.

Summary and Current Study

Available research suggests that religion is an important aspect of everyday life for many people living in the United States (Gallup Poll, 2006; Newport, 2006). As a result, religion can often play a role in how individuals cope with stressful situations (e.g., Pargament, 1997; Tarakeshwar & Pargament, 2001; Tix & Frazier, 1998). Coping mechanisms are employed when individuals experience stressful situations. One event that is typically perceived as stressful is having a chronic illness (Kazak et al., 2004; Landolt et al., 2003). A stressful event, such as experiencing a chronic illness, then precipitates a coping response. This coping response is dynamic and continues to develop and change as the person ages and as they experience more and varied stressful events (Compas, Conner-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Folkman & Moskowitz, 2004; Gil et al., 1997; Pargament, 1997). Therefore, it may be the case that adolescents who have experienced a greater number of stressful events (e.g., a chronic illness) may cope differently than those adolescents who have not had such experiences.

Along with religious coping, religious orientation is likely to be affected when an adolescent has a chronic illness. For instance, a quest religious orientation, by definition, is related to the amount of "tensions" and "tragedies" a person experiences (Batson, 1976). Those adolescents who have a chronic illness have likely experienced a greater number of such events. An intrinsic religious orientation is related to the degree to which a person has fully internalized their religious beliefs, while an extrinsic religious orientation is related to a person keeping their religious beliefs on the periphery of their life and viewing religion as a way to accomplish some other end goal (Allport & Ross, 1967). Due to the intensity of the experience related to having a chronic illness, it is likely that those adolescents who have a chronic illness may view the role religion plays in their life differently from those adolescents who have not had such an experience. Additionally, it may be the case that a person's religious orientation is related to the type of religious coping they utilize (Pargament et al., 1992).

The aim of the current study was to expand the literature of religious orientation and religious coping. Of particular interest was how adolescents with a chronic illness may differ from their healthy peers with respect to their religious orientation and religious coping. The current study assessed religious orientation and religious coping in healthy and chronically ill adolescents, ages 13 to 17. The study utilized self-report measures to better understand the internalizing aspects of religious orientation and religious coping. The study also explored general coping, hope, and quality of life as potential correlates of the religious variables.

Hypotheses

It was expected that having a chronic illness, and the perceived severity of that illness (e.g., how life threatening it is perceived to be) would influence adolescents' religious orientation and religious coping.

Hypothesis 1: Those who have a chronic illness are likely to have spent more time exploring the more existential aspects of their faith and to have internalized more aspects of their faith as compared to their healthy peers. Therefore, it was hypothesized that adolescents who have a chronic illness would score higher on quest and intrinsic religious orientation and would also be more likely to use religious coping strategies relative to healthy peers. No group differences on extrinsic religious orientation were expected.

Hypothesis 2: It was hypothesized that those adolescents within the chronic illness group, who perceived their illness as more serious and more life threatening would be more likely to have internalized the teachings of their religion and to have spent more time contemplating the existential aspects of their faith than those adolescents with a chronic illness who have not considered the illness to be particularly severe or life threatening. Therefore, it was hypothesized that the more serious and life threatening an adolescent perceived his or her illness to be, the higher the score on either quest or intrinsic religious orientation and the more likely he or she would be to use religious coping.

CHAPTER II

METHODOLOGY

Participants

There were a total of 179 participants, consisting of two groups of adolescents (Control and Chronic Illness) between the ages of 13 and 17 (M = 15.08, SD = 1.41 years). Fifty-eight percent of the sample was female. Sixty-two percent of the participants self-identified as African American and 36 percent reported being Caucasian. Ninety-four percent reported being religious and, of those, 97 percent stated they were Christian. The average family Hollingshead Index of Socioeconomic Status was 38.76 (SD = 12.54) which is considered to be in the social strata of "Skilled craftsmen, clerical, sales worker" (Hollingshead, 1975). See Table 1 for a breakdown of demographic variables by group.

Measures

Intrinsic/Extrinsic-Revised Scale. The Intrinsic/Extrinsic-Revised (I/E-R) is a 14-item self-report measure of religious orientation (Gorsuch & McPherson, 1989). It utilizes a 5-point Likert-type scale that ranges from "strongly disagree" to "strongly agree." It is used in conjunction with the Quest scale to help classify the religious orientation of participants. It is made up of two primary subscales, Intrinsic and Extrinsic religious orientation. The extrinsic subscale can be further subdivided into two secondary subscales: Extrinsic Social and Extrinsic Personal. The I/E-R is a revised version of the Age Universal I-E scale (Gorsuch & Venable, 1983) which is a revised version of Allport and Ross' (1967) Religious Orientation scale. The I/E-R can be used to assess intrinsic and extrinsic religious orientation in children (5th grade and up) as well as in adults. Internal consistency for the Intrinsic and Extrinsic primary subscales have been stronger (α = .83 and .65, respectively) than for the Extrinsic Social and Personal secondary subscales (α = .58 and .57, respectively; Gorsuch & McPherson, 1989). Reliability coefficients for the present study were as follows: Intrinsic .72, Extrinsic .70, Extrinsic Social .81, and Extrinsic Personal .64.

Table 1

Participant Demographics

	Primary Groups		Chronic Illness Subgroups			
Variable	Control (N=98)	Chronic Illness (N=81)	Sickle Cell Disease (n = 27)	Cancer (n = 21)	Diabetes Mellitus (n = 27)	Other (n = 6)
Age of Child in Years M (SD)*	15.3 (1.5)	14.8 (1.3)	15.1 (1.4)	14.4 (1.1)	14.7 (1.3)	15 (1.1)
Sex of Child	n (%)					
Male	41 (41.8)	35 (43.2)	15 (55.6)	11 (52.4)	8 (29.6)	1 (16.7)
Female	57 (58.2)	46 (56.8)	12 (44.4)	10 (47.6)	19 (70.4)	5 (83.3)
Race of Child**	n (%)					
African Amer.	56 (57.1)	54 (66.7)	27 (100)	14 (66.7)	11 (40.7)	2 (33.3)
Caucasian	40 (40.8)	25 (30.9)	0	7 (33.3)	15 (55.6)	3 (50)
Hispanic	1 (1)	0	0	0	0	0
Asian	1 (1)	0	0	0	0	0
Multiracial	0	2 (2.5)	0	0	1 (3.7)	1 (16.7)
Religious Affiliation of Child	n (%)					
Baptist	67 (68.4)	46 (56.8)	15 (55.6)	14 (66.7)	15 (55.6)	2 (33.3)
Catholic	10 (10.2)	2 (2.5)	1 (3.7)	1 (4.8)	0	0
Church of Christ	1 (1)	4 (4.9)	2 (7.4)	0	1 (3.7)	1 (16.7)
Episcopal	1 (1)	2 (2.5)	1 (3.7)	0	1 (3.7)	0
Jehovah's Witness	1 (1)	0	0	0	0	0
Jewish	0	1 (1.2)	0	1 (4.8)	0	0
Methodist	2 (2)	1 (1.2)	0	1 (4.8)	0	0
Presbyterian	5 (5.1)	3 (3.7)	0	0	3 (11.1)	0
Other		4 (4.9)	0	1 (4.8)	2 (7.4)	1 (16.7)
Other Christian	6 (6.1)	7 (8.6)	2 (7.4)	2 (9.5)	3 (11.1)	0
Not reported	5 (5.1)	11 (13.6)	6 (22.2)	1 (4.8)	2 (7.4)	2 (33.3)
Hollingshead SES M (SD)**	40.1 (12)	37.1 (13.1)	31.2 (10.8)	38.6 (12.7)	42 (14.4)	38.1 (11.6)

Note: * Indicates significant mean differences between the Chronic Illness and Healthy Groups, $p < .05$. ** Indicates significant mean differences between the Chronic Illness Groups, $p < .05$. See results section for analyses.

Revised Quest Scale-Adolescent Version. In a preliminary study conducted by the author, the Revised Quest Scale-Adolescent Version (RQS-A; see Appendix A) was developed by simplifying the wording of 11 out of the 12 items on the Revised Quest Scale (RQS; Batson & Schoenrade, 1991a, 1991b). The RQS is the revised version of the 6-item original quest scale (Batson & Ventis, 1982). The RQS utilizes a 9-point Likert-type response format. It has demonstrated acceptable internal consistency (Cronbach's alphas range from .75 to .82) and adequate construct validity as it has correlated well with the original scale, ranging from .85 to .90 (Batson & Schoenrade, 1991b). Both the original and revised Quest scales have been shown to be valid measures of the quest construct (Batson & Schoenrade, 1991a). Additionally, it has been shown to distinguish between those members of a more traditional religious group from those members of a more nontraditional, charismatic religious group, with the members of the nontraditional group scoring significantly higher on the Quest Scale (Batson & Schoenrade, 1991a).

The original Quest Scale has been used with adolescents as young as 11 (Hostetter, 2006). The RQS has a raw score reading grade level of 9-10th grade (Dale & Chall, 1948). A preliminary study was conducted by the author to develop an early adolescent version of the RQS. The author revised items retaining the content but lowering the reading level to create the Revised Quest Scale-Adolescent Version (RQS-A). Expert reviewers were then asked to rate how conceptually similar each item of the RQS-A was to the RQS. Expert reviewers consisted of four doctoral level clinical child psychologists, three experimental psychologists who conduct research in the area of religion, and three religious leaders (i.e. Baptist minister, Catholic priest, and

Presbyterian minister). Reviewers were asked to read both the RQS item and the RQS-A item. They were asked to indicate how conceptually similar they believed the two items to be. They were also given space to write suggestions for ways to make the RQS-A items more similar to the RQS items. Suggestions were then implemented and the newly created RQS-A was given to 147 college participants along with the RQS and the Age Universal I-E Scale. To help establish temporal stability of the RQS-A, 47 participants were given the RQS-A and RQS two weeks after the first administration. The RQS-A was found to have a raw score reading grade level of 4th grade or below (Dale & Chall). This lower reading level will allow it to be used with younger adolescents.

The response format of the RQS-A utilizes a 5-point Likert-type response format, simplified from the 9-point scale of the RQS. Bivariate correlations revealed a strong positive correlation ($r = .81, p < .01$) between the RQS-A and the RQS, suggesting that the RQS-A and RQS are measuring the same construct. Similarly, bivariate correlations of the RQS-A with the Age Universal I-E scale (Intrinsic subscale, $r = -.19, p < .05$; Extrinsic subscale, $r = .34, p < .01$) were comparable to correlations of the RQS and the Age Universal I-E scale (Intrinsic subscale, $r = -.23, p < .01$; Extrinsic subscale, $r = .31, p < .01$). Additionally, these findings are consistent with what has been previously reported in the literature with the correlation between Quest and the Intrinsic subscale ranging from -.10 to .10 and correlations between Quest and the Extrinsic subscale ranging from .00 to .25 (Batson & Schoenrade, 1991a). Two week test-retest reliability for the RQS-A was good, $r = .83, p < .01$. Results indicated that in the test-retest population the RQS-A and RQS were correlated, $r = .90, p < .01$. This is similar to what was found for the RQS time 1 and time 2 correlations ($r = .84, p < .01$). The RQS-A revealed an acceptable coefficient alpha of .72 in the present study.

KIDCOPE. The KIDCOPE (Spirito, Stark, & Williams, 1988) adolescent version is a 10-item self-report measure assessing general coping among adolescents aged 13 to 18. Each item is followed by two questions (i.e., How often do you do this? How much did it help?). The first question is answered using a 4-point Likert-type response format (0 = not at all to 3 = almost all of the time), and the second question is answered using a 5-point Likert-type response format (0 = not at all to 4 = very much). The directions given with the KIDCOPE ask the participant to focus on coping with a stressor of the researcher's choosing. For this study, participants were asked to focus on a general stressor (i.e., an argument with parents over not doing chores). The KIDCOPE measures positive and negative coping strategies and assesses a total of 10 different coping categories: problem-solving, distraction, social support, social withdrawal, cognitive restructuring, self-criticism, blaming others, emotional regulation, wishful thinking, and resignation (Spirito, Stark, & Williams, 1988). The KIDCOPE was normed on both healthy and pediatric populations ranging in age from 10 to 18 years (Spirito, Stark, & Williams, 1988). It is not specific to chronic illness stressors and can also be used with more typical stressors occurring in adolescence (Schmidt, Petersen, & Bullinger, 2003). It has also been used to assess those who have experienced a natural disaster, more specifically a hurricane (Jeney-Gammon, Daugherty, Finch, Belter, & Foster, 1993). Additionally, the KIDCOPE is widely used and has acceptable psychometric properties. The KIDCOPE items have demonstrated a 3 day test-retest reliability of .56 to .75. Additionally, the KIDCOPE total score has correlated (.33 to .77) with another theoretically similar measure of general coping, the Coping Strategies Inventory (Spirito, Stark, & Williams) indicating adequate convergent validity.

Children's Spiritual Coping Measure. The Children's Spiritual Coping Measure (Shelton, 2004) is a 24-item self-report measure for children ages 6 to 18 used to assess the type and degree of spiritual coping across 8 domains: declarative, petitionary, collaborative, belief in God's support, belief in God's intervention, spiritual social support, ritual response, and benevolent reappraisal. The CSCM utilizes a 3-point Likert-type response format (1 = yes, 2 = no, 3 = don't know). The scores on all eight domains are summed to create a total score. The scores can also be reported based on total scores for four factors: Declarative Spiritual Coping (i.e., believe that God is required to do what is asked of him; Pendleton et al., 2002), Petitionary Spiritual Coping (i.e., the adolescent asks God for something but realizes that God has a choice and so may not grant the request; Pendleton et al, 2002), Faith Spiritual Coping (i.e., believe that God will do something positive to change the situation or that the situation can be viewed as having a positive aspect; Shelton, 2004), and Intervening Spiritual Coping (i.e., believe that God has the ability to help in a situation; Shelton, 2004).

The psychometric properties of the CSCM are not as well established as the other measures used in this study, due to its recent development. To date, the CSCM has only been validated with children who have severe asthma or cystic fibrosis. However, the CSCM was selected because it is the only known self-report measure of religious coping in children. Shelton (2004) found that scores on the CSCM were negatively correlated ($r = -.54, p < .01$) with scores on the BASC Behavioral Symptoms Index, which was used as a global measure of emotional distress. Shelton also reported that scores on the CSCM were negatively correlated with emergency room visits related to their medical diagnosis ($r = -.20, p < .05$). In addition, those children who reported themselves as being a member of the Christian or Jewish faith had higher levels of spiritual coping (higher scores on the CSCM) than did those children that did not report belonging to any particular religion. Children that rated higher on the CSCM also tended to have parents that rated higher on measures of spiritual coping, religious well-being, and existential well-being. Reliability was evaluated in the current study and found to be good for the total scale ($\alpha = .85$; see Table 2 for alpha for each factor by group).

Table 2

Internal Consistency of the Children's Spiritual Coping Measure

Factors of Children's Spiritual Coping Measure	Alpha for all participants (N = 177)	Alpha for Chronic Illness participants (n = 77)	Alpha for Control participants (n = 100)
Total scale reliability	.85	.89	.75
Factor A Declarative Spiritual Coping	.67	.67	.66
Factor B Petitionary Spiritual Coping	.44	.42	.45
Factor C Faith Spiritual Coping	.77	.83	.70
Factor D Intervening Spiritual Coping	.76	.81	.67

Children's Hope Scale. The Children's Hope Scale (CHS) is a 6-item self-report measure used to assess the degree of hopefulness in adolescents (Snyder et al., 1997). The CHS uses a 6-point Likert-style response format (1 "none of the time" to 6 "all of the time"). The CHS has two subcomponents, Pathway (capable of producing workable routes to achieve a goal) and Agency (initiating and sustaining movement toward that goal). However, it has been recommended that only total scores be used for analyses (Snyder et al., 1997). It has demonstrated good internal consistency ($\alpha = .77$), and is believed to be a valid measure of hopefulness. Cronbach's alpha for this study was .80.

Pediatric Quality of Life Inventory-Short Form 4.0^{TM}. The Pediatric Quality of Life Inventory-Short Form version 4.0^{TM} (PedsQL-SF) is a 15-item self-report measure used to assess an adolescent's health-related quality of life (Varni, Seid, & Kurtin, 2001; Varni, Seid, & Rode, 1999). The PedsQL-SF^{TM} uses a 5-point Likert-style response format (0 = never to 4 = almost always). The PedsQL-SF^{TM} contains 4 subscales: physical, emotional, social, and school functioning. Scores on the PedsQL-SF^{TM} can be derived by averaging the raw scores within each of the four subscales, averaging all of the raw scores to find a total average score, or averaging the raw scores to yield a physical health summary (comprised of the physical functioning subscale) and a psychosocial health summary score (comprised of the emotional, social, and school functioning subscales). For the purposes of this study, averages for the subscales along with the averages for the two summary scores were used. The PedsQL-SF^{TM} is widely used and has demonstrated acceptable psychometric properties (Varni et al., 1999). Cronbach's alpha for this study was .85.

In addition to the above measures, a measure was included to assess the effects of Hurricane Katrina, which hit the gulf coast region on August 29th, 2005. Due to data collection occurring in the areas directly impacted by Hurricane Katrina, the HURTE (Vernberg, LaGreca, Silverman, & Prinstein, 1996) was used to assess the degree to which participants were personally affected by the natural disaster. This was done to ensure that those in the Control and Chronic Illness groups were equally affected by the hurricane and to allow for the effects of the hurricane to be statistically controlled.

Hurricane-Related Traumatic Experiences. The Hurricane-Related Traumatic Experiences questionnaire (HURTE; Vernberg, LaGreca, Silverman, & Prinstein, 1996) is a 17-item self-report measure of how affected a child was by a hurricane. The HURTE utilizes a dichotomous rating system allowing the child to check Yes or No to each item. The HURTE is made up of three subscales which can be categorized as perceived life threat, life-threatening experiences, and loss-disruption experiences. To determine the severity of each of these types of experiences, the scores within each of the subscales are summed. For the present study, the individual subscale sums were also combined to form an overall total. The reported psychometric properties of the HURTE are limited; however, it is one of the few measures designed specifically to assess the degree to which a child has been affected by a hurricane. Scores on the HURTE have been found to be significant predictors of future posttraumatic stress symptoms related to Hurricane Andrew (LaGreca, Silverman, Vernberg, & Prinstein, 1996; Vernberg, LaGreca, Silverman, & Prinstein, 1996). Cronbach's alpha for this study was .80.

Demographic questionnaire. A demographic questionnaire was given to both the parent and the adolescent. The parent demographic form contained questions regarding the parent's age, race, sex, family income, education level, and religious affiliation (see Appendix D). Included in the demographic portion of the parent packet were 16 questions which helped to assess for major life events that may have taken place in the child's life within the last year. The adolescent questionnaire asked similar questions (e.g., age, race, sex, religious affiliation, amount of time spent thinking about religion; see Appendix B).

In addition to these standard forms, the chronic illness group was also asked specific information about the illness. Within the chronic illness group, the parent and adolescent were asked to report on the adolescent's illness (e.g., what illness it was, how often the adolescent has symptoms) and how life threatening they believed it to be (see Appendices C & E).

Procedure

Control group. Control group participants were obtained through the assistance of undergraduate students at the University of Southern Mississippi. Approval for all parts of the study were granted by the University of Southern Mississippi's Institutional Review Board (see Appendix K). Undergraduate students were recruited using the university's online research participant recruiting system (Experimetrix). Undergraduate students were given extra credit points or course credit for recruiting participants for this study. Undergraduates were asked to approach an adolescent they knew (e.g., younger sibling, friend, relative) and that adolescent's parent/guardian. The undergraduate was instructed to inform the adolescent and their parent/guardian that their participation would be completely voluntary, their responses would be kept confidential, and participation should take approximately 30 minutes. The undergraduate was given an instruction sheet to help him or her with this recruitment process. The undergraduates were given a telephone number to contact the researcher if they had any questions. In order for an adolescent to participate, he or she had to sign a letter of assent and his/her parent/guardian had to sign a letter of consent (see Appendix E). Those adolescents who agreed to participate were given a research packet and asked to complete it. The research packets consisted of a demographic questionnaire for both the parent and child, the I/E-R, the KIDCOPE, the CSCM, the RQS-A, the PedsQL-SF, the CHS, and the HURTE.

Participants were asked to provide a telephone number where the researcher could reach his/her parent/guardian. Undergraduate students returned the research packets to the researcher. The researcher then telephoned the parent/guardian to verify consent, and that their child filled out the research packet. Eighty-three percent of the parents were able to be reached by phone and all stated they had given permission for their child to participate. Given that all of those phone verified were usable, the remaining 17% were also believed to be valid, and thus, were included.

Chronic Illness group. Chronic Illness group participants were recruited from the University of Mississippi Medical Center (UMMC) and the Diabetes Foundation of Mississippi. The Institutional Review Board at UMMC approved data collection at their site. Data collection through the Diabetes Foundation of Mississippi was approved by the Executive Director. Cancer and Sickle Cell Disease groups were collected through UMMC, and the Diabetes Mellitus group was collected through the Diabetes Foundation. Cancer and Sickle Cell group participants were approached when they arrived for their regularly scheduled appointments. The researcher only approached those patients who were the appropriate age and accompanied by a parent or guardian. This information was obtained through the assistance of clinic staff. Upon approaching those with cancer, the researcher enquired about the duration of the child's illness. If the child had been diagnosed for less than 6 months he or she was thanked, but not asked to complete the research packet. Participants and their parents/guardians were approached while sitting in the clinic waiting area. They were given a brief explanation as to the purpose of the study, they were told it would take approximately 25 minutes to complete the research questionnaires, that participation was completely voluntary, their responses would be kept confidential and not connected with their medical records in anyway, and that their participation or lack of participation would in no way effect their medical treatment. In order for an adolescent to participate he/she had to sign a letter of assent and his/her parent/guardian had to sign a letter of consent (see Appendices F & G). Those who agreed to participate were given the research packet and asked to complete it while waiting to be seen by the medical staff. The research packet was completed by the participant while he/she was in either the clinic waiting area or the patient room, depending upon clinic flow. The researcher collected the research packet upon completion. Those who declined to participate were thanked for their time. The names of those who agreed to participate and those who declined were noted so as to avoid re-approaching them at a later date. No incentives were offered for participation.

The Diabetes Mellitus group was recruited with the assistance of the Diabetes Foundation of Mississippi. Research packets were mailed out to the parents of 130 adolescents who were on the foundation's mailing list. The researcher was never given access to the contact information of the participants. Packets included research materials as well as a letter from the foundation explaining why they were being sent this information and ensuring that their contact information was not being shared. Those wishing to participate were asked to sign the informed consent/assent (see Appendix H), complete the questionnaires, and return the information to the researcher using stamped and addressed envelopes included in the mailer. Participants were offered a $10 gift card to Wal-Mart. Interested participants were asked to provide a mailing address where the gift card could be sent (26 out of 27 accepted the gift card).

CHAPTER III

RESULTS

Preliminary Analyses to Evaluate Group Equivalence

Preliminary analyses were conducted to determine if there were differences between the healthy and the chronic illness groups on any of the demographic variables. A chi square analysis was computed for the categorical demographic variables (i.e., sex, race, and religious affiliation). Except where otherwise indicated, alpha was set at .05 for analyses. No significant differences were observed on sex, race, or religious affiliation when comparing the healthy control group to the chronic illness group, χ^2 (1, $N = 179$) = .03, $p = .85$, χ^2 (1, $N = 176$) = 2.03, $p = .15$, and χ^2 (1, $N = 157$) = .08, $p = .78$, respectively. For purposes of analyses, race was divided into two categories, African American and Caucasian. All others (n = 3) were not coded. Similarly, religious affiliation was divided into Baptist and Other Christians. All others (n = 5) were not coded.

An independent samples *t*-test demonstrated that there was a significant difference for child age between those with and without a chronic illness (equal variances not assumed), t (176.79) = -2.39, $p = .02$, with those having a chronic illness having a significantly lower mean age than healthy controls. This is, therefore, a possible confound for analyses comparing the healthy and chronic illness groups. However, while this was a statistically significant difference, it represented a difference of less than six months so it is unlikely that this age difference can be attributed to any robust influences. Additionally, age was not correlated with any of the dependent variables (see Table 3) so it is very unlikely that any findings were influenced by these age differences. There were no differences in SES between healthy and chronic illness groups, t (172) = -1.54, p = .13. There were no differences between the healthy and chronic illness group on any of the three subscales of the HURTE: perceived life threat, t (172) = .95, p = .34, life-threatening experiences, t (173) = -.53, p = .59, and loss-disruption experiences, t (173) = -.26, p = .80.

Further analyses were conducted to determine if there were any differences between the three chronic illness groups. A chi square did not demonstrate a significant difference between the illness groups for the child's sex or religious affiliation, χ^2 (2, N = 75) = 4.25, p = .12 and χ^2 (2, N = 62) = .78, p = .68, respectively. A chi square did demonstrate a significant difference for the child's race χ^2 (2, N = 75) = 20.33, $p < .001$, due to the Sickle Cell Disease group being made up entirely of African American adolescents. This is a possible confound for analyses comparing the illness subgroups to one another; however, it was unavoidable due to the racial genetic basis of Sickle Cell Disease. An ANOVA assessing for mean differences in child age across the Cancer, Sickle Cell Disease, and Diabetes Mellitus groups did not reveal a significant difference, F (2, 72) = 1.95, p = .15. Mean differences were computed for the Cancer, Sickle Cell Disease, and Diabetes Mellitus groups and there was a significant difference with regard to Hollingshead Socioeconomic Status, F (2, 68) = 4.77, p = .01. A post hoc analysis (Tukey HSD) revealed that the Hollingshead SES for the Sickle Cell group was significantly lower than that of the Diabetes Mellitus group (p =.01). SES, therefore, is a potential confound for comparisons involving the Sickle Cell Disease and Diabetes Mellitus groups. There were no differences between the Cancer, Sickle Cell Disease, and Diabetes Mellitus groups on any of the three subscales of the HURTE: perceived life threat, $F(2, 67) = .75, p = .48$, life-threatening experiences, $F(2, 68) = 1.95, p = .15$, and loss-disruption experiences, $F(2, 68) = .18, p = .83$.

Preliminary Analyses to Identify Control Variables

In order to determine if any demographic variables should be controlled for in the main analyses, the relationship between the demographic variables and the religious dependent variables were assessed (see Table 3). Bivariate correlations revealed that child's age and sex were not significantly related to any of the dependent variables. The child's race when entered as a dichotomous variable (i.e., African American = 1 and Caucasian = 2) was correlated with extrinsic religious orientation, extrinsic personal religious orientation, declarative spiritual coping, and general spiritual coping. The socioeconomic status of the child's family was significantly correlated with intrinsic religious orientation, declarative spiritual coping, and faith spiritual coping. The child's religious affiliation when entered as a dichotomous variable (i.e., Baptist =1 and Other Christians = 2) was correlated with general spiritual coping, declarative spiritual coping, and faith spiritual coping. Additional analyses were computed to determine if the perception of illness severity, by either the adolescent or the parent, was correlated with any of the demographic variables. The perception of illness severity was not correlated with any of the demographic variables (see Table 4). Bivariate correlations were also computed with demographic variables and the secondary constructs/variables of QOL, hope, and general coping. The only significant correlations were that sex was weakly negatively correlated with physical functioning, $r = -.15, p = .045$, and emotional functioning, $r = -.26, p < .001$.

Table 3

Correlations for Demographic Variables and Religious Dependent Variables

	Intri RO	Ex Soc RO	Extrin Person RO	Extrin RO	Ques RO	Declar SC	Petit SC	Faith SC	Inter SC	Total SC
Age	-.08	-.04	-.03	-.04	-.07	-.04	-.00	-.08	-.11	-.10
Race†	.15	-.10	-.25**	-.21**	-.14	-.44**	.15	-.10	-.11	-.18*
Sex	.09	-.06	-.05	-.02	-.03	-.01	.04	-.01	-.08	-.03
SES	.16*	.03	-.04	.00	.03	-.22**	-.02	.12	-.08	-.04
Rel Aff†	-.03	-.07	-.08	-.09	-.10	-.22**	.07	-.25**	-.12	-.24**

Note. * $p < .05$. ** $p < .01$. † Dichotomized. RO = Religious Orientation; SC = Spiritual Coping; Intri = Intrinsic; Ex Soc = Extrinsic Social; Extrin = Extrinsic; Person = Personal; Ques = Quest; Declar = Declarative; Petit = Petitionary; Inter = Intervening.

Table 4

Correlations of Demographic Variables and the Perceived Severity of the Illness Variables.

	Age	Race	Sex	SES	Religious Affiliation	Loss or disruption after hurricane
Parent perceived illness severity*	-.03	-.04	-.13	.05	-.04	.05
Adolescent perceived illness severity*	.06	-.03	.20	-.06	.15	-.17

Note. All correlations non-significant at p = .05. *This item was created by multiplying "perceived life threat" item by "how serious consider illness to be" item.

Scores on the HURTE were compared to the scores on the dependent variables using bivariate correlations to determine if hurricane-related stress should be entered as a control variable in the analyses. The subscale of the HURTE that assessed for the loss or disruption of events after the hurricane was correlated with intrinsic religious orientation ($r = -.26, p = .001$), faith spiritual coping ($r = -.25, p = .001$), and intervening spiritual coping ($r = -.17, p = .024$). Therefore, this subscale of the HURTE was entered as a control variable in subsequent analyses.

Main Analyses

To test the first hypothesis, multivariate analyses of covariance (MANCOVAs) and univariate analysis of covariance (ANCOVA) were conducted, comparing the chronically ill children to the healthy children on the religious dependent variables. The religious dependent variables were entered together based on the theoretical constructs (i.e., religious orientation, religious coping). The first MANCOVA included all of the religious orientation variables (i.e., Intrinsic, Quest, Extrinsic Social, and Extrinsic Personal). The second MANCOVA included all of the four spiritual coping factors (i.e., Declarative, Petitionary, Faith, and Intervening Spiritual Coping). The ANCOVA assessed general spiritual coping (CSCM total score) between the two groups. To control for type 1 error, alpha was set at .01 for univariate follow-up tests.

In the first model testing the religious orientation variables, the covariates entered were the dichotomized race of the child, SES, and the loss or disruption of events after the hurricane. SES was determined to have no significance in the model and so was removed. The omnibus model was significant for group differences, Hotelling's Trace = .07, $F(4, 165) = 2.92, p = .023$. From here the specific DVs were investigated. There was a significant difference between the healthy and the chronically ill children on the following variables: intrinsic religious orientation, *F* (3, 168) = 4.96, *p* = .003 and extrinsic personal religious orientation, *F* (3, 168) = 4.83, *p* = .003.Those with a chronic illness reported greater intrinsic religious orientation. Those in the healthy group reported greater extrinsic personal religious orientation.

In the second model testing the factors of spiritual coping, the covariates entered were the dichotomized race of the child, dichotomized religious affiliation, SES, and the loss or disruption of events after the hurricane. The child's religious affiliation and SES were determined to have no significance in the model and so were removed. The omnibus model was not significant for group differences, Hotelling's Trace = .034, *F* (4,164) = 1.413, *p* = .232. The third model assessed for group differences in the adolescent's report of general spiritual coping. The covariates entered were dichotomized race and religious affiliation. There was a significant difference between the groups with the chronic illness group reporting using general spiritual coping more than the healthy group, *F* (3, 150) = 5.114, *p* = .002.

To test the second hypothesis, a series of bivariate correlations were conducted to assess the relation between each of the religious dependent variables and the level of perceived severity of illness across illness groups. The variable of *perceived severity of illness* was calculated by summing the response to the item "How life threatening is your illness?" (1 = not at all life threatening to 9 = very life threatening) and the response to the item "How serious do you think your illness is?" (1 = not at all serious to 9 = very serious). Due to these items being on both the parent and child demographic questionnaires, both parent and child responses were statistically evaluated. The child's perceived severity of his/her illness was not significantly correlated with any of the ten religious dependent variables and neither were either of the two items that make up the perceived severity item. The parent's perceived severity of the child's illness was not correlated with any of the religious dependent variables. However, the item that asked "how life threatening" the parent perceived the child's illness, was negatively correlated with intervening spiritual coping, $r = -.23, p < .05$.

A series of ANOVAs were then conducted to determine if there were significant mean differences between the cancer, sickle cell disease, and diabetes mellitus groups on the three perceived severity of the illness items. There were no group differences in the ratings of the adolescents or the parents for the perceived severity of the illness.

The second hypothesis also proposed that adolescents with a chronic illness spend more time thinking about God or their religion than do healthy adolescents. An independent samples *t*-test was performed to determine if there was a significant difference between the healthy and chronic illness groups. Those with an illness reported thinking about God or their religion significantly more than healthy adolescents ($t = 2.24$, $p = .027$). Additionally, the parent and child's perception of illness severity was positively correlated, $r = .44, p < .001$.

Exploratory Analyses for Spiritual Coping

Given that religious orientation and religious coping had not previously been studied in both chronically ill and healthy adolescents, and that there are known group differences on religious orientation, correlations were examined separately for the healthy and chronic illness groups (see Tables 5 and 6). For those *with* an illness, extrinsic religious orientation was positively correlated with intervening spiritual coping; extrinsic personal religious orientation was positively correlated with both declarative and intervening spiritual coping; and intrinsic religious orientation was positively correlated with both faith and intervening spiritual coping. For those *without* an illness, extrinsic religious orientation was positively correlated with declarative spiritual coping; extrinsic personal religious orientation was positively correlated with faith spiritual coping; and intrinsic religious orientation was positively correlated with faith spiritual coping.

Table 5

Correlations for Religious Orientation and Religious Coping Variables in Chronic Illness Participants

	Declarative SC	Petitionary SC	Faith SC	Intervening SC	Total SC
Intrinsic	-.04	.26*	.55**	.48**	.51**
Extrinsic Social	.11	-.05	.07	.10	.09
Extrinsic Personal	.23*	.21	.25*	.40**	.37**
Extrinsic Total	.20	.08	.19	.30**	.27*
Quest	.03	.15	-.05	.11	.05

Note. SC = Spiritual Coping
* $p < .05$. ** $p < .01$.

Exploratory Analyses for Additional Constructs

Further analyses were computed to help determine the role of additional constructs of interest with regard to religious orientation and religious coping. The additional constructs of interest were hope, general coping, and quality of life.

Table 6

Correlations for Religious Orientation and Religious Coping Variables in Healthy Participants

	Declarative SC	Petitionary SC	Faith SC	Intervening SC	Total SC
Intrinsic	.05	-.04	.40**	.17	.29**
Extrinsic Social	.15	-.07	.00	.04	.06
Extrinsic Personal	.23*	.01	.25*	.20	.29**
Extrinsic Total	.25*	-.05	.14	.14	.20*
Quest	.18	-.09	-.03	-.09	-.01

Note. SC = Spiritual Coping
* $p < .05$. ** $p < .01$.

Hopefulness. In terms of general hopefulness, there was not a difference between those who had an illness and those who did not, F (1, 177) = .84, p = .36, nor was there a difference between the specific illnesses, F (2, 72) = .92, p =.40. When assessing the full sample of participants, bivariate correlations revealed that scores on the hopefulness measure (i.e., CHS) were significantly positively correlated with all of the spiritual coping factors: declarative spiritual coping, r = .18, p = .016; petitionary spiritual coping, r = .17, p = .021; faith spiritual coping, r = .22, p = .003; intervening spiritual coping, r = .20, p = .007; and general spiritual coping, r = .27, $p < .001$. Additionally, scores on the CHS were positively correlated with intrinsic religious orientation, r = .16, p = .035, and extrinsic personal religious orientation, r = .28, $p < .001$.

General Coping. An independent samples t-test was computed to assess for differences between the healthy and chronic illness groups on a measure of general coping (i.e., KIDCOPE). Given that children with a chronic illness have likely had more reasons to utilize a coping strategy, it was predicted that children with a chronic illness would utilize more positive strategies than the control group. However, there were no significant differences between the healthy and chronic illness groups on any of the positive strategies. There were significant differences between the groups with regard to various forms of negative coping. In general, those with a chronic illness reported utilizing negative coping strategies less than those who do not have a chronic illness. Healthy participants reported a higher reliance on the following strategies: self-criticism, $t = 1.17, p < .001$, negative emotional regulation (e.g., yelling, screaming, hitting things; $t = 3.42, p = .001$), wishful thinking, $t = 3.99, p < .001$, and resignation, $t = 2.50, p = .013$. The one exception to this was the strategy of blaming others, in which those with a chronic illness reported utilizing more than those in the healthy group, $t = 2.12, p = .036$.

Bivariate correlations were computed to determine if any of the general coping strategies were correlated with any of the religious dependent variables. Five of the coping strategies were not correlated with any of the religious DVs (i.e., negative emotional regulation, social support, resignation, cognitive restructuring, and wishful thinking). See Table 7 for significant correlations. Correlations were then computed for each group due to known group differences for intrinsic and extrinsic personal religious orientation and general spiritual coping. Within the chronic illness group, problem solving was negatively correlated with petitionary, $r = -.37, p < .001$, faith, $r = -.26, p = .021$, intervening, $r = -.25, p = .029$, and general spiritual coping, $r = -.29, p = .01$. Social withdrawal was negatively correlated with petitionary spiritual coping, $r = -.22, p = .05$. Positive coping was positively correlated with faith spiritual coping, $r = .22, p = .05$. Within the healthy group, positive emotional regulation was negatively correlated with general spiritual coping, $r = -.24, p = .018$, and intervening spiritual coping, $r = -.32, p < .001$. No other correlations were significant in either group.

Table 7

Correlations for KIDCOPE and Religious Dependent Variables

	Distraction	Social Withdrawal	Self-Criticism	Blaming Others	Problem Solving	Positive Emotional Regulation	Total Positive Coping	Total Negative Coping
Intrinsic	-.02	-.10	.03	-.09	-.10	-.05	.14	-.18*
Extrinsic Social	.06	.04	-.04	-.04	.06	.03	.05	.07
Extrinsic Personal	.17*	-.02	.02	-.09	-.01	-.13	.19*	.15
Extrinsic	.14	.02	-.02	-.08	-.04	-.04	.14	.14
Quest	-.09	-.06	-.02	-.16*	.01	-.05	.05	.14
Declarative SC	.08	-.03	.02	-.11	.07	-.10	-.02	-.04
Petitionary SC	-.10	-.19*	.16*	-.09	-.21**	-.07	.20**	.07
Faith SC	.02	.00	.08	-.05	-.11	-.14	.17*	.01
Intervening SC	-.06	-.08	.10	-.05	-.16*	-.22**	.10	.04
Total SC	-.02	-.07	.11	-.09	-.14	-.20**	.15*	.02

Note. SC = Spiritual Coping
* $p < .05$. ** $p < .01$.

Quality of Life. T-tests were computed to assess for differences between the healthy and chronic illness groups on the quality of life variables, physical health and psychosocial health. The groups differed on physical QOL, $t = -2.38, p = .019$ (equal variances not assumed), with the healthy group reporting higher physical QOL. The groups also differed on psychosocial health, $t = 2.25, p = .026$, with the chronic illness group reporting higher psychosocial QOL. None of the variables that comprise psychosocial health (i.e., school, social and emotional functioning) differed significantly between the two groups when entered in a MANOVA, Hotellings T = .038 *F* (3, 172) = 2.20, *p* = .090. Furthermore, no differences were found when a MANOVA was used to compare the illness subgroups on the variables of QOL.

A series of moderated multiple regressions were then performed to determine if health status moderated the relationship between the four religious orientations and QOL and between general spiritual coping and QOL (Holmbeck, 2002). These analyses were conducted because it was theorized that spiritual coping might differentially affect adolescents QOL depending on whether or not they have a chronic illness. This was, in part, predicted due to the additional stresses adolescents with a chronic illness experience and the subsequent effect this is likely to have on QOL. Health status was shown to moderate the relationship between general spiritual coping and psychosocial QOL, $t = -2.401$, $p = .017$ (see Figure 1). The simple slope for the healthy group was significant, $t = 2.95$, $p = .004$. The simple slope for the chronic illness group was not significant, $t = -.009$, $p = .99$. Therefore, for the healthy group, higher psychosocial QOL was evident if the children used higher levels of spiritual coping. Health status was also shown to moderate the relationship between general spiritual coping and physical QOL (see Figure 2). The simple slope for the healthy group was significant, $t = 2.31$, $p = .022$. The simple slope for the chronic illness group was not significant, $t = -.62$, $p = .538$. Again, high levels of general spiritual coping were associated with higher levels of physical QOL, but only for the healthy group. Health status was also shown to moderate the relationship between extrinsic social religious orientation and physical QOL (see Figure 3). This time, the simple slope for the chronic illness group was significant, $t = -2.57, p = .011$, and the simple slope for the healthy group was not, $t = 1.01, p = .312$. The findings from this model indicated that for those who have a chronic illness their physical QOL decreases as they report higher levels of extrinsic social religious orientation.

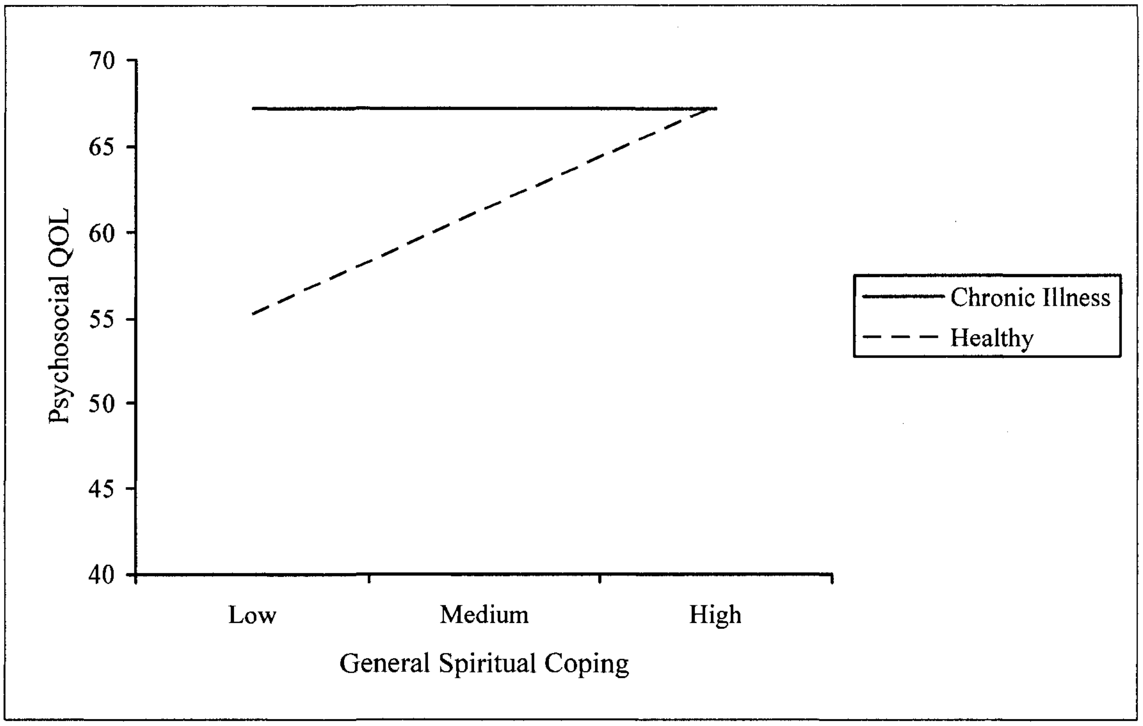

Figure 1: General Spiritual Coping and Psychosocial Quality of Life with Health Status as a Moderator

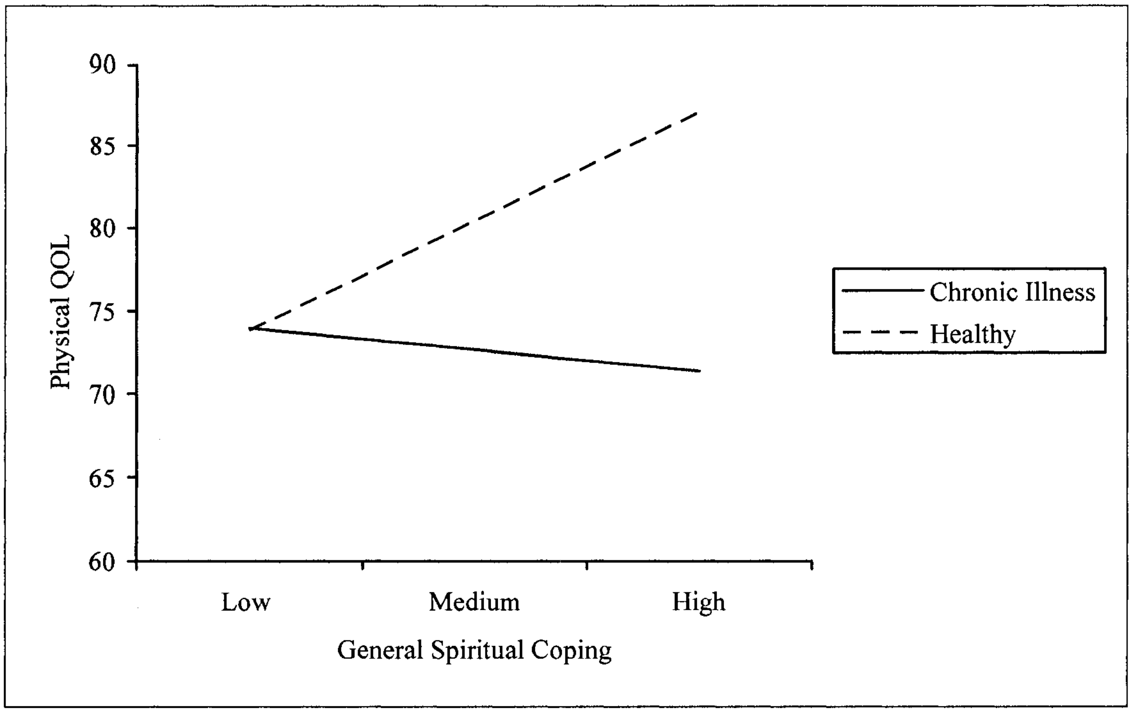

Figure 2: Spiritual Coping and Physical Quality of Life with Health Status as a Moderator.

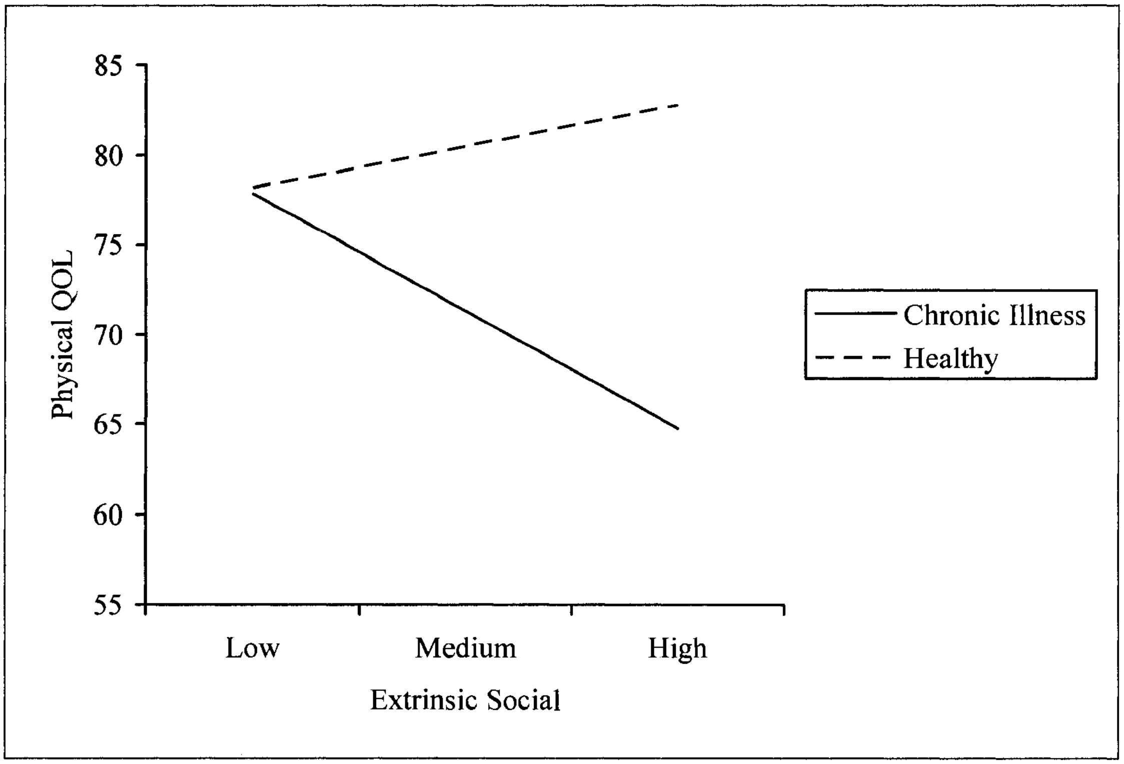

Figure 3: Extrinsic Social Religious Orientation and Physical Quality of Life with Health Status as a Moderator.

Bivariate correlations were then conducted to determine if there were correlations among these three variables (i.e., hope, coping, and quality of life). It was thought that higher levels of positive coping would be related to higher levels of hope and that both of these would then translate into a higher quality of life. It was found that there were positive correlations between positive coping and both psychosocial QOL, $r = .159$, $p = .035$, and hope, $r = .339$, $p < .001$; as well as between hope and psychosocial QOL, $r = .413$, $p < .001$. There was also a negative correlation between negative coping and psychosocial QOL, $r = -.211$, $p = .005$. Due to the correlations of hope with both positive coping and psychosocial QOL, and the predicted causal effect of positive coping on hope, a mediational model was tested (Jose, 2003). To accomplish this, a series of three multiple regression analyses were conducted. First, positive coping was entered with QOL (DV), $t = 2.13$, $p = .035$. Second, positive coping was then entered with hope (DV), $t = 4.76$, $p < .001$. Finally, positive coping and hope were then entered simultaneously with QOL as the DV. In this instance, positive coping was not significant, $t = .34$, $p = .731$, and hope was significant, $t = 5.53$, $p < .001$. A Sobel test of indirect effects confirmed that hope fully mediated positive coping and psychosocial QOL, $z = 4.04$, $p < .001$ (see Figure 4).

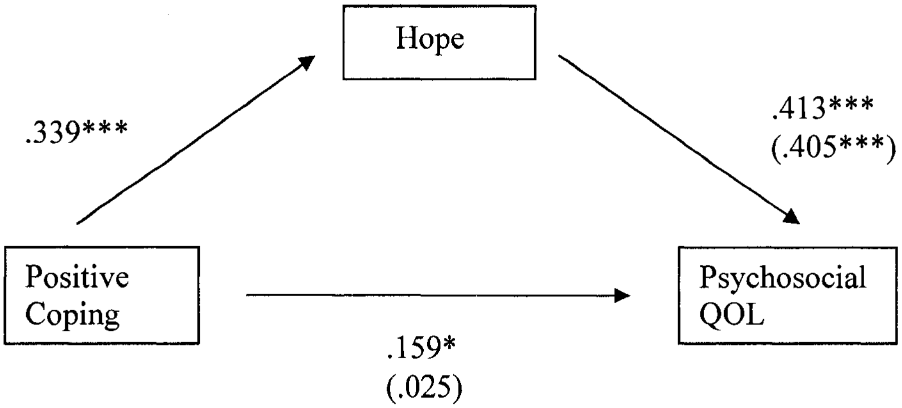

Figure 4: Mediation of Hope on Positive Coping and Psychosocial Quality of Life
Note. Items in parentheses are values of correlations after the mediational analysis was computed. ***$p < .001$. **$p < .01$. *$p < .05$

CHAPTER IV

DISCUSSION

The issues of religious coping and religious orientation during adolescence have been largely ignored in the literature (Cardella & Friedlander, 2004; Pargament, 1997; Pendelton et al., 2002), and the constructs have not been studied together in an adolescent sample (Pargament, 1997). This study aimed to explore each of these constructs in both a typically developing adolescent sample and an adolescent sample that has a chronic illness. Given that there was a minimal amount of information about religious orientation and religious coping in these groups, this study was largely exploratory in nature.

As was expected, the majority of participants reported that they belonged to the Christian faith. This is consistent with what was has been previously reported in the literature for this region of the country (Greer, Berman, Varan, Bobrycki, & Watson, 2005). The healthy and chronic illness groups were demographically similar with the exception of the healthy group being significantly older than the chronic illness group; however this was an actual mean difference of less than six months and so is not believed to have significant influence on the findings. Additionally, prior researchers have shown that intrinsic and extrinsic religious orientation are not affected by age, in a young adult population (Swanson & Byrd, 1998). However, there were significant differences between the illness groups with regard to race, due to the Sickle Cell Disease group being made up entirely of African Americans. Additionally, the Sickle Cell Disease group had a significantly lower mean SES than the Diabetes Mellitus group. Neither of these variables (i.e., race, SES) is believed to have had significant influences on the findings as neither was significantly correlated with the dependent variables on which these groups were compared (e.g., illness perception, hope). Additionally, there were no significant findings when the illness subgroups were compared to one another.

The first hypothesis was supported when tested controlling for race and hurricane-related stress. Children with a chronic illness reported internalizing their religious beliefs more than adolescents without a chronic illness. They also reported engaging in more general spiritual coping than the healthy group. The healthy/control group reported having greater extrinsic personal religious orientation when no differences were expected. In other words, the healthy adolescents reported being more motivated to partake in religious activities in order to gain personal comfort than adolescents with a chronic illness. These results indicate that adolescents with a chronic illness have more fully internalized their religious beliefs and rely on religious/spiritual coping more than the healthy group. Despite a small mean group difference in age of less than six months across the groups, age was not correlated with any of the dependent variables in these analyses, and thus, is not believed to confound these findings. Rather, since coping is not a static process, individuals' coping processes evolve as new stressors are encountered (Gil et al., 1997; Pargament, 1997). Although the cross-sectional nature of this study precludes causative conclusions regarding the impact of experiencing a chronic illness and subsequent changes in religious beliefs and coping, it has been shown that having a chronic illness is associated with greater stress (Kazak et al., 2004; Landolt et al., 2003). Thus, it stands to reason that coping may be better developed among individuals with chronic illness relative to healthy peers. Religion also can help add a sense of meaning to a stressful situation (Krause, 1998; Mailick, Holden, Walther, 1994; Pargament, 1997) and this sense of meaning may be one of the reasons adolescents with a chronic illness report relying more heavily on religious coping and more fully internalizing their religious beliefs.

Adolescents with a chronic illness were expected to spend more time thinking about God or their religion than their healthy peers, and this was found to be true. It was thought that this contemplation was necessary to fully internalize their religious beliefs. It was also predicted that thinking about God might lead to more questions which might lead to higher quest scores. However, no group differences on quest were found. This may be because quest scores have historically been highest in nontraditional, charismatic religious groups (Batson & Schoenrade, 1991a). This sample was comprised of participants belonging almost entirely to traditional religions (almost all were Christian and 72% of those were Baptist). This lack of heterogeneity in religious affiliation likely contributed to the similar findings between groups.

With regard to the second hypothesis, bivariate correlations revealed that adolescents' perceptions of the severity of an illness did not correlate with religious orientation or religious coping. However, parents' perceptions of how life threatening the child's illness is was negatively correlated with intervening spiritual coping. Due to the general population worrying more about getting cancer than other diseases (Jones, 2003), it was expected that adolescents diagnosed with cancer would perceive their illness to be more life threatening than those diagnosed with either Sickle Cell Disease or Diabetes Mellitus. This was not found to be the case. These findings may be due to the fact that the majority of the Cancer sample (i.e., 81%) obtained for this study reported that their child was currently in remission. Given the lack of active treatment in the sample it is unlikely that the parents of adolescents would perceive their illness as any more serious or threatening than the other illness groups. It is likely that if the study were replicated with a group of adolescents in the midst of active treatment the findings would be different.

The relationship of the religious orientation and religious coping variables were then assessed for each group (i.e., healthy, chronic illness). The pattern of correlations suggests that within the chronic illness group, there is a relationship between intervening spiritual coping (i.e., believe that God has the ability to help in a situation; Shelton, 2004) and the religious orientation variables. Intervening spiritual coping was positively correlated with intrinsic, extrinsic personal, and extrinsic religious orientation. However, this relationship was not found in the healthy group. Thus, it may be interesting to assess possible moderating influence of health status on these relationships in future studies.

Similarly, significant correlations for the chronic illness, but not the healthy, group suggests that health status may affect the relationship between intrinsic religious orientation and petitionary spiritual coping (i.e., adolescent asks God for something but realizes that God has a choice and so may not grant the request; Pendleton et al, 2002). Again, it would seem likely that children with a chronic illness have frequently asked God for something that others in their lives (e.g., parents, friends, and relatives) could not grant, and have sometimes received what they requested and sometimes have not. Whereas, those in the healthy group may have had less occasion to make such requests of God. Future studies should test these potential moderating models.

Quest religious orientation was not correlated with any form of religious coping. Although the literature is silent on this issue, adolescents who report themselves more likely to utilize various forms of spiritual coping may also be more likely to report that religion is playing a stable role in their lives, as is the case with intrinsic and extrinsic religious orientation. Conversely, for adolescents who are actively questioning their religious beliefs, as is the case with a quest orientation, it may be difficult to turn to religion as a coping resource. It may be that when adolescents are actively questioning their religious beliefs the religious/spiritual coping process is hindered.

This study also examined the relationship of three other constructs (i.e., hope, general coping, and QOL) to religious orientation and spiritual coping. The first construct of interest was hope. Health status was not related to the degree of hopefulness an adolescent reported. This was unexpected given that previous research found children and adolescents with a chronic illness were less hopeful than their healthy peers (Venning et al., 2007). The degree of hopefulness reported was, however, significantly positively correlated with all of the types of spiritual coping measured in this study (i.e., declarative, petitionary, faith, intervening, and general spiritual coping). It may be that hopefulness is a necessary prerequisite for employing spiritual coping. It may also be that having faith in something greater than oneself, which would be necessary to utilize spiritual coping, allows an adolescent to be hopeful. Hope was also found to be positively correlated with both internalizing religious beliefs (i.e., intrinsic religious orientation) and with gaining personal comfort from religion (i.e., extrinsic personal religious orientation).

A second construct of interest was general coping. With regard to general coping, it was expected that adolescents with a chronic illness would employ more positive coping strategies than the healthy adolescents. The reason for this is that, as was stated earlier, coping is not a static process; each new stressful situation is an opportunity to try out a new coping strategy (Compas et al., 2001; Folkman & Moskowitz, 2004; Pargament, 1997). Additionally, coping is particularly flexible during childhood and adolescence (Gil et al., 1997) which is possibly due to having had limited prior experiences with using coping strategies. Given the added number of stressors adolescents with chronic illness have experienced, it was theorized that they would cope differently than their healthy peers. It was specifically theorized that adolescents with a chronic illness would have realized that positive strategies are the most beneficial on a long-term basis and so would be more likely to use them. However, adolescents who have experienced few stressors may not have realized this, and thus, may be more likely to use negative coping strategies.

The results of this study do lend general support for this theory. It was found that healthy/control participants utilized more negative coping strategies than the chronic illness participants, when race was controlled. Those in the healthy group reported blaming themselves, yelling, hitting things, wishing the negative thing had never happened, and giving up and believing they could not do anything about it more than the chronic illness group. Only when it came to blaming others were the chronic illness participants more likely to use negative coping strategies than the healthy participants. It may be that adolescents with a chronic illness have learned not to blame themselves for negative events and so have learned to attribute blame to someone or something external to themselves. Once again, group differences in age do not confound these findings, as age was not correlated with general or spiritual coping.

This study explored how general coping is related to spiritual coping. Due to the recent development of the CSCM, it had not been previously administered with a measure of general coping. Results suggested that when adolescents believed they could ask God for something and it may or may not be granted (i.e., petitionary spiritual coping; Pendleton et al, 2002) they tended to be less likely to socially withdraw, more likely to blame themselves, less likely to engage in problem solving, and generally more likely to report utilizing the positive coping strategies. Adolescents who believed that God can intervene in a situation to make it better or that they can influence God to intervene through prayer (i.e., intervening spiritual coping; Shelton, 2004) were less likely to try to problem solve, and less likely to try and calm themselves down through talking to themselves or praying. Adolescents who believe that God will do something positive to change the situation or that the situation can be viewed as having a positive aspect (i.e., faith spiritual coping; Shelton, 2004) were more likely to use positive coping strategies. Adolescents who reported using general religious coping were also more likely to use positive coping strategies. Interestingly, they also reported they were less likely to try and calm themselves down by using pray or talking to themselves. Thus, these findings indicate that faith and general spiritual coping are clearly related to positive forms of general coping. Conversely, intervening spiritual coping is related to more negative forms and petitionary is related to both positive and negative forms.

The constructs of religious orientation and general coping were also assessed. Intrinsic religious orientation was negatively correlated with general negative coping, quest religious orientation was negatively correlated with blaming others, and viewing religion as a source of personal comfort (i.e., extrinsic personal religious orientation) was positively correlated with general positive coping and with distraction. The first finding may be explained by looking at what has already been reported in this study. Participants with a chronic illness were more likely to report greater intrinsic religious orientation and to rate themselves less likely to use negative coping strategies. The negative correlation between intrinsic religious orientation and negative coping may be causal, but it is more likely that it is the result of a third variable such as cumulative effect of stressful life experiences. The negative correlation between quest and blaming others may be attributed to those who are higher in quest being generally in a questioning frame of mind, therefore, not readily blaming others for difficulties. There is no clear explanation for the third finding.

A third construct of interest was QOL. This study set out to explore the differences between healthy and chronic illness participants with regard to QOL and the potential differential relationships among religious orientation and religious coping. Consistent with prior literature, adolescents in the healthy group reported higher physical functioning than did their chronic illness counterparts as has been previously reported (De Bolle et al., 2008; Eiser & Morse, 2001). Interestingly, those in the chronic illness group reported higher psychosocial QOL (i.e., school, social, emotional functioning) than healthy adolescents. While, there is no reason to assume adolescents with chronic illness would report having low psychosocial QOL, it is unexpected that they would report having higher psychosocial QOL than their healthy peers.

Health status was subsequently examined as a potential moderator of relationships between religious orientation and coping and QOL. Health status was found to moderate the relationships between general spiritual coping and both psychosocial and physical QOL, and between extrinsic social religious orientation and physical QOL. Those in the chronic illness group had consistently higher levels of psychosocial QOL regardless of their spiritual coping; however, within the healthy group it was found that psychosocial QOL increased proportionally with spiritual coping. So it would seem that reporting using higher levels of general spiritual coping and being generally healthy may be a protective factor that increases the adolescents' psychosocial QOL. Regarding physical QOL, those in the chronic illness group were once again unaffected by changing levels of spiritual coping and reported having the same level of physical QOL, regardless of the amount of spiritual coping. However, the healthy group's higher spiritual coping was once again related to higher physical QOL. Health status also moderated the relationship of extrinsic social religious orientation and physical QOL. Within the chronic illness group high levels of extrinsic social religious orientation were related to decreased levels of physical QOL. Therefore, it would seem that health is a protective factor. This was shown to be the case when assessing for the effect spiritual coping has on physical and psychosocial QOL. Having a chronic illness has been associated with a poorer QOL (De Bolle, De Clercq, De Fruyt, & Benoit, 2008; Eiser & Morse, 2001) as has the use of negative religious coping strategies (Tarakeshwar et al., 2006). Similarly, positive religious coping strategies have been found to be related to higher QOL (Tarakeshwar et al.). In the measure of spiritual coping used the only form of coping assessed for was positive. This helps to explain why in both cases general spiritual coping was related to higher QOL. Once again, age does not influence these findings as age was not correlated with QOL, coping, or religious orientation.

After analyzing the relationships of hope, general coping, and QOL with the primary constructs of interest, interrelationships were examined. Positive coping was positively correlated with psychosocial QOL and hope. Negative coping was inversely correlated with psychosocial QOL. This was expected given previous findings stating that negative coping strategies are correlated with poor QOL (Marsac et al., 2006). It stands to reason that people who use positive coping strategies are also more likely to have a higher QOL and to be more hopeful. Hope was found to be positively correlated with psychosocial QOL. A mediational model was then tested and hope was found to fully mediate positive coping and psychosocial QOL. This underscores the importance of hopefulness in helping to enhance a person's QOL. Although these findings were for the combined sample of healthy and chronically ill participants, they do lend support to previous findings already reporting the importance of hope in the adjustment to chronic illness (Irving et al., 1998; Maikranz et al., 2007; Snyder et al., 2005; Venning et al, 2007). Additionally, negative coping was negatively correlated with psychosocial QOL again indicating the importance of helping a child learn to reduce negative coping and learn to employ positive coping strategies.

Limitations

As with any study, there are limitations to this one. One limitation of the study was the discrepancy between how the control and chronic illness samples were collected. These groups were collected at different sites using different methods of recruitment. In studies involving pediatric samples, this sampling problem is difficult to overcome. However, replication using similar recruitment strategies is encouraged. Another limitation is that the chronic illness sample was likely too heterogeneous. It is possible that analyses comparing the healthy and chronic illness group might have demonstrated more differences, if only one type of illness had been assessed. There were differences between each of the illness groups and so the variance within the group might have to lead to decreased findings between the groups. A related limitation is that the majority of participants in the Cancer group were in remission. It is likely that a sample of adolescents in the midst of active cancer treatment would have responded differently than those having successfully completed treatment.

A fourth limitation was the manner in which data was collected, in that the diabetes sample was collected differently than the other samples. The diabetes sample was obtained through the use of mailers with addresses coming from the Diabetes Foundation of Mississippi. Those receiving the mailers were offered an incentive of a ten dollar gift card to participate. All other chronic illness participants were approached in person by the researcher and were not offered an incentive. Analyses of demographic information did not reveal any differences specific to the Diabetes Mellitus group; however, there is no way to know if such differences in sample collection had a result on any of the dependent variables.

A fifth limitation focused on lack of geographic diversity, which likely contributed to the homogeneity of religious affiliation reported by the participants. As a result of this, the present findings are only representative of Christian adolescents and, more specifically, Protestant Christians who are primarily Baptist. Also, due to the large number of participants belonging to the Baptist faith, religious affiliation was dichotomized as Baptist and other Christians. Given that there was no group difference related to the dichotomized religious affiliation variable, it unlikely that this dichotomization caused significant difficulties. However, future studies may address this limitation through stratified sampling techniques or dichotomizing the sample on a conceptually meaningful basis (e.g., Protestant and Catholic, Christian and Jewish). A seventh limitation is the general exploratory nature of this study. For this reason many of the analyses were preliminary and exploratory in nature. Many of the relationships were only of modest to moderate strength. Given the large number of analyses run it is possible that some findings may be spurious. We attempted to minimize any such findings by using two-tailed analyses and using the most conservative post hoc analyses.

Directions for Future Research

Given that so little research has been done in this area, the possibilities for future research are extensive. One area that would be particularly revealing would be to conduct a longitudinal study looking at religious orientation and religious coping through adolescence and into early adulthood. This would allow researchers to better understand what is really occurring during this important developmental period and how that then affects religious orientation and coping of adults. It would also be informative if children/adolescents could be gathered either prior to illness onset or at initial diagnosis. This would allow researchers to assess religious orientation and religious coping before and after illness onset. This would help determine if having a chronic illness results in a change in reported religious orientation and coping. Given that the adolescent's family of origin likely plays a significant role in their religious development it would be interesting to duplicate the current study and obtain similar self-report information from both parents and adolescents. This would allow researchers to examine relationships between religious orientation and coping of parent and child to determine how they compare. Ideally, any future studies would contain a more heterogeneous sample of religious affiliations. Future studies could also utilize more moderation statistical models. For instance, a moderation model could be utilized to determine if health status moderates the effects of religious orientation and religious coping on various forms of adolescent well-being.

Despite the limitations of this study, a great deal of previously unknown information was obtained. Adolescents with a chronic illness report internalizing their religious beliefs more fully and spending more time thinking about God/their religion than healthy adolescents. There was also found to be a difference in the type of coping employed by those with an illness compared to those without. Those with an illness were more likely to use declarative spiritual coping. Additionally, there were found to be differences with regard to the use of negative and positive general coping strategies. Adolescents in the healthy group reported using more negative coping strategies than the chronic illness group. Interestingly, hope was found to partially mediate the relationship between extrinsic personal religious orientation and spiritual coping. All of these findings add to the literature base which previously offered little understanding about the role of religious orientation and religious coping in adolescent populations. This study also aided in our understanding of the effect having a chronic illness can have on an adolescent's developing religious orientation and on the coping process. Future studies should seek to replicate and further explore the development and impact of religious orientation and religious coping among youth with chronic illnesses.

Appendix A: Revised Quest Scale – Adolescent Version

Please indicate the extent to which you agree or disagree with each of the items by using the following scale. Please CIRCLE your answer.

1. As I grow and change, I expect my religion also to grow and change.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

2. I always question if what I believe about my faith is right.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

3. I think it is important to question things about my faith.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

4. I did not think much about religion until I started to think about the meaning and point of my own life.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

5. For me, not being sure of things is an important part of what it means to be religious.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

6. I do not think my beliefs about my faith will change any time soon.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

7. When I am not sure about my beliefs about God, it upsets me.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

8. I ask more questions about God as I learn more about trouble in my world and how I fit in with my world.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

9. Things that have happened in my life have changed what I believe about my faith.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

10. My thoughts about many things related to God are still changing.

I strongly disagree I tend to disagree I'm not sure I tend to agree I strongly agree

11. God was not very important to me until I began to ask questions about the meaning of my own life.

I strongly disagree   I tend to disagree   I'm not sure   I tend to agree   I strongly agree

12. I think that in religion the questions are more important than the answers.

I strongly disagree   I tend to disagree   I'm not sure   I tend to agree   I strongly agree

Appendix B: Adolescent Demographic Form

Please circle the appropriate answer:

Gender: Male Female Age:________

Ethnicity:

African-American Asian Caucasian Hispanic Latino (Non-Hispanic)

Native American Pacific Islander Multi-racial

Other:________________

Do you consider yourself religious? Yes No

If Yes, please circle which religion you belong to:

Baptist Buddhist Catholic Church of Christ Episcopalian Hindu

Islamic Jehovah's Witness Jewish Methodist Mormon Presbyterian

Other:_____________________

How often do you attend a religious service (ex. Church or Temple)?

Never A few times a year Once a month Once a week More than once a week

How often do you think about God or your religion?

Never Not Very Often Sometimes Most of the Time All of the Time

Do you talk to your parents or other people about God? Yes No

Appendix C: Additional Demographic Questions Included for Chronic Illness Group

What illness do you have? Sickle Cell Diabetes Cancer

How old were you when you got sick? _____________

Do you consider your illness to be under control?

1	2	3	4	5
Yes		Somewhat		No

How often do you have symptoms (ex. feel sick) because of your illness?

1	2	3	4	5	6	7	8	9
Never				Some				All
				Of the Time				Of the Time

In the last year, how many days do you think you have spent in the hospital because of your illness? _____ days

How life threatening is your illness?

1	2	3	4	5	6	7	8	9
Not at all				Somewhat				Very
Life Threatening				Life Threatening				Life Threatening

How serious do you think your illness is?

1	2	3	4	5	6	7	8	9
Not at all				Somewhat				Very
Serious				Serious				Serious

Appendix D: Parent Demographic Form

Questions about your child:

Your child's Date of Birth: ____________ Your child's Age: _______

Your child's Ethnicity: ____

Your child's Sex (please circle): Male Female

Does your child have a chronic illness? Yes No

If yes, what illness? ____

Questions about you:

Your Age: _____________ Your Sex (please circle): Male Female

Your Ethnicity: ____

Your relation to the child (please circle): Parent Grandparent
Aunt/Uncle
Foster Parent Other:__________________________________

How many adults live in your home? _____ How many children live in your home? ____

What is your current marital status? (Please circle which one applies to you):

Married Single/Never Married Divorced Widowed Separated

Living with Partner/Never Married Living with Partner/Previously Married

What is the highest level of education (grade in school) you completed?

____

What is the highest level of education (grade) your partner/spouse completed?

____

What is your occupation? _____________________________________

What is your partner/spouse's occupation? _________________________________

What is your households estimated yearly income (please circle)

$0-10,000 $11,000-25,000 $26,000-30,000 $31,000-45,000
$46,000-60,000

$61,000-75,000 $76,000-100,000 $over 100,000

Do you consider yourself religious? Yes No

If Yes, please circle which religion you belong to:

Baptist Buddhist Catholic Church of Christ Episcopalian

Hindu

Islamic Jehovah's Witness Jewish Methodist Mormon

Presbyterian

Other:____________________

How often do you attend a religious service (ex. Church or Temple)?

Never A few times a year Once a month Once a week More than once a week

Does your child attend these services with you? Yes No Some of the Time

Do you talk to your child about God? Yes No

Please circle YES if any of these things has happened to YOUR CHILD in the PAST YEAR and circle NO if they have not.

During the last year, did your child get suspended from school?	YES	NO
During the last year, did your child move to a new home?	YES	NO
During the last year, did your child change where he or she went to school?	YES	NO

During the last year, has a new baby come into the family?	YES	NO
During the last year, has anyone moved out of your child's home?	YES	NO
During the last year, did you get a divorce?	YES	NO
During the last year, has there been a great deal of marital conflict in your child's home?	YES	NO
During the last year, did a family member die?	YES	NO
During the last year, did another close relative or friend die?	YES	NO
During the last year, has a family member become seriously ill, injured badly, and/or had to stay at the hospital?	YES	NO
During the last year, has your child seen anyone get hurt badly by someone else?	YES	NO
During the last year, has your child been afraid to go outside and play, or have you made your child stay inside because of gangs or drugs in your neighborhood?	YES	NO
During the last year, has your child been in a fire or explosion?	YES	NO
During the last year, has your child or someone close to your child been in a transportation accident (ex. car, plane, boat, train)?	YES	NO
During the last year, has your child experienced a natural disaster (ex. hurricane, flood, tornado, earthquake)?	YES	NO
During the last year, has your child been attacked/assaulted?	YES	NO

Appendix E: Additional Parent Demographic Questions for Chronic Illness Group

What illness does your child have? Sickle Cell Diabetes Cancer

How old was your child when he or she was first diagnosed? _____________

If your child has ***diabetes*** is he or she supposed to take insulin? Yes No

If your child has diabetes, what type do they have? Type 1 Type 2 Not Sure

If your child has ***cancer*** what kind does he or she have?_______________________________

Has it ever been in remission? Yes No

When? ____________________ For how long? ___________________

Is it currently in remission? Yes No

Do you consider your child's illness to be under control?

1	2	3	4	5
Yes		Somewhat		No

How often does your child have symptoms (ex. feel sick) because of his or her illness?

1	2	3	4	5	6	7	8	9
Never				Some Of the Time				All Of the Time

In the last year, how many days do you think your child has spent in the hospital because of his or her illness? _____ days

How life threatening is your child's illness?

1	2	3	4	5	6	7	8	9
Not at all Life Threatening				Somewhat Life Threatening				Very Life Threatening

How serious do you think your child's illness is?

1	2	3	4	5	6	7	8	9
Not at all Serious				Somewhat Serious				Very Serious

Appendix F: Informed Consent for Control Group

Dear Parent,

You are being invited to participate in a research study because you are the parent or legal guardian of a child between the ages of 13 and 17. This study asks questions about religious beliefs and coping styles. If you are not religious that does not matter, you can still participate in this study.

If you are a USM student you will receive 2 points on Experimetrix for participating. If you are not a USM student you will be helping a USM student receive extra credit points that can be put towards a psychology course. There are no direct benefits for participating in this study. You will not be given any information about your or your child's scores on the questionnaires. However, through your help in completing this project, we hope to learn more about the role religion plays in the lives of teenagers and parents. There is little risk associated with completing the study, although you may find it mildly distressing to report on personal religious beliefs. If you or your child finds answering such questions distressing, please feel free to stop participation. If you or your child continues to feel distressed about these questions you may want to contact one of the following mental health agencies: USM Student Counseling Center 601-266-4829, Gutsch Counseling Center 601-266-4601, USM Psychology Clinic 601-266-4588, Pine Grove Recovery Center 601-288-4800, Pine Belt Mental Health Resources 601-544-4641.

If you and your child agree to participate you will each be asked to fill out a few questionnaires which will take about 20-30 minutes. We will also ask for your phone number, so that we can call you in approximately 1 week to verify that you and your child filled out the questionnaires. This will be a brief phone conversation that will last approximately 2 minutes. After we reach you by telephone, this letter will be separated from your answers on the questionnaires. Questionnaires will not include your name or your child's name. Each packet will be coded with a number. The code list will be locked in a file cabinet in the principal investigator's lab. The principal investigator might use this information in other studies like this one. If study results are published in a journal, your name will not be used.

Your and your child's participation is voluntary. If you decide not to participate in this study you will not suffer a penalty or loss of benefits to which you are otherwise entitled. If you decide to participate in this study you may discontinue your participation at any time, without penalty or loss of benefits. USM students will not be penalized if you decide not to participate.

If you have any questions or need to report any problems or want additional information about being a study participant, please call Jacqueline Brown at (601) 266-4588 during business hours (8 a.m. to 5 p.m., Monday through Friday). This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406, (601) 266-6820.

By signing below, you are indicating that you have read this letter, had an opportunity to ask questions about this study, and are agreeing to participate in this study. Thank you for your interest in this research study.

Sincerely,

Jacqueline Brown, M.A.
Graduate Student in Clinical Psychology

Parent/Guardian name	Telephone	Best time to call

Signature of parent/guardian	Date

Your child's printed name

Printed Name of USM student to assign the extra credit

Appendix G: Informed Consent for Parent Sickle Cell Disease and Cancer Samples

CONSENT TO PARTICIPATE IN RESEARCH

The University of Mississippi Medical Center

Study Title: Religious orientation and religious coping in a chronically ill adolescent population.

Principal Investigator: Jacqueline B. Brown, M.A.

Introduction

You/your child are being invited to participate in this study because you have an adolescent with a chronic illness, and we are interested in learning more about how adolescents cope with a chronic illness and what role their religious beliefs play in this process. If you agree to participate and to allow your child to participate, you/your child will be asked to answer some questions about your/your child's religion and about how you/your child copes. Please ask us about anything in this document or that we tell you that you do not understand.

Purpose

The purpose of this study is to try and learn more about religion in adolescents and their parents/guardians and how adolescents with a chronic illness cope with that illness. We hope to learn what might help children cope with ongoing stressful events such as having a chronic illness.

Procedure

If you/your child agree to participate, you/your child will be asked to fill out some questionnaires. It is expected that it will take you approximately 15 minutes and your child about 30 minutes to fill out the questionnaires. This can be done while you and your child are waiting to see the doctor or other medical staff. After you and your child have completed the questionnaires, your/your child's participation will be over. The questionnaires will be collected by the researcher. You/your child will not be asked to do anything else.

Your/your child's participation will not interfere with your child's doctor's appointment or medical attention. Whether or not you/your child decide to participate will have no effect on your child's medical care.

It will take approximately 12 months to complete this study. If you/your child are interested in knowing the results once the study has been completed, we will be happy to provide you/your child with information about the group.

Risks

There are no known risks associated with participating in the study. However, you or your child may become tired or feel uncomfortable while answering questions. If this happens, you and your child are free to stop at any time without it having any effect on your child's medical care.

Benefits

You/your child will not receive a direct benefit from being in this research study. We hope to learn information that may help others in the future.

Alternatives

This is not a treatment study and the alternative is not to participate in this study. If you/your child decide not to participate it will not change your child's medical care.

Costs

There will be no additional costs to you/your child if you/your child participate in the study.

Participation is voluntary

Your/your child's participation is voluntary. If you/your child decide not to participate you will not suffer a penalty or loss of benefits to which you or your child are otherwise entitled. If you/your child decide to participate in this study, you/your child may discontinue participation at any time without penalty or loss of benefits, and it will have no effect on your child's medical care.

Confidentiality

Every effort will be made to keep the information we learn about you/your child private. Study personnel, the Office for Human Research Protections (OHRP), the Food and Drug Administration (FDA), and the University of Mississippi Medical Center's Institutional Review Board (IRB) and Office of Compliance may review the study records. If study results are published, your name will not be used.

To maintain your privacy the questionnaires will be coded with a random number so that your information will not be associated with your name, only the code number.

Number of Participants

We expect to enroll 80 participants in this study.

You will be given a copy of this consent document for your records.

Questions

If you have any questions about this study or need to report any problems, please call Jacqueline Brown at (601) 815-1793 during business hours (8 a.m. to 5 p.m., Monday through Friday). After hours or on weekends, please call (601) 466-1447.

You may discuss your/your child's rights as a research participant with the Chairman of the University of Mississippi Medical Center's Institutional Review Board, 2500 North State Street, Jackson MS 39216; telephone, (601) 984-2815; facsimile, (601) 984-2961. The Institutional Review Board is a group of people not involved with this study who have reviewed the study to protect your/your child's rights.

Statement of Participation

I and my child have been told about this study and the possible risks and benefits. My/my child's participation is voluntary and I/my child may withdraw at any time without any penalty or loss of benefits to which I/my child am entitled, including medical care at the University of Mississippi Medical Center

By signing this form I/my child am not giving up any legal rights I/my child may have.

____
Participant's (Parent/Guardian) Printed Name

____
Signature of Participant (Parent/Guardian)

____
Date

____

Printed Name of Person Obtaining Consent

____
Signature of Person Obtaining Informed Consent

____
Date

I acknowledge that the participant identified above has been entered into this study, with properly obtained informed consent.

____
Signature of Principal Investigator

____
Date

Appendix H: Signature Page of Letter of Assent for Adolescent Sickle Cell Disease and Cancer Samples: Letter is Identical to Informed Consent for Parents

By signing this form I/my child am not giving up any legal rights I/my child may have.

____
Participant's Printed Name

____
Printed Name of Minor Participant

____
Assent of Minor Participant (13 to 17 years-old)

____
Date

____
Printed Name of Parent or Legal Guardian of minor participant and relationship to minor participant

____
Signature of Parent or Legal Guardian

____
Date

____
Printed Name of Person Obtaining Consent

____
Signature of Person Obtaining Informed Consent

____
Date

I acknowledge that the participant identified above has been entered into this study, with properly obtained informed consent.

____
Signature of Principal Investigator

____
Date

Appendix I: Parent Informed Consent for Diabetes Sample

Dear Parent,

You are being invited to participate in a research study that is interested in how teenagers with diabetes cope with their illness. More specifically, we are interested in how religion might play a role in this coping process. It does not matter if you are religious or not - both perspectives will provide important information. We would also like you, the parent or guardian, to fill out some questionnaires, because we are curious to see if children use coping strategies that are similar to their parents.

If you and your child are willing to participate, simply sign at the bottom of this letter and return in the smaller addressed/stamped white envelope, and then fill out the attached questionnaires and return them in the addressed/stamped manila envelope along with your child's. Your child's questionnaires are attached to the letter that begins "Dear Teenager." It will likely take you about 10 minutes to complete your questions, and it will take your child approximately 10 to 25 minutes, depending on his or her reading speed. I would like to send your child a **$10** Wal-Mart **gift card** to thank him/her for answering the questions. If it is okay with you that your child receives this gift card, please list an address where you would like the gift card sent at the bottom of this letter. This address will only be used to send your child the gift card and will not be used in any other way. Once the completed questionnaires are received, your child will then be sent a **$10 gift card** to Wal-Mart to thank him or her for participating. There are no anticipated risks associated with completing this study. It is possible, although unlikely, that you may find it mildly distressing to report on personal religious beliefs. If you or your child finds answering such questions distressing, please feel free to stop participation. If you or your child continues to feel distressed about these questions, feel free to contact me to receive contact information for mental health professionals in your area. These questionnaires will not include your name or your child's name, so the responses will be anonymous.

Your and your child's participation is voluntary. If you decide not to participate in this study, you will not suffer a penalty or loss of benefits to which you are otherwise entitled. If you have any questions, need to report any problems, or want additional information about being a study participant, please call Jacqueline Brown at (601) 266-4588 during business hours (8 a.m. to 5 p.m., Monday through Friday). This project has been reviewed by the Human Subjects Protection Review Committee at the University of Southern Mississippi, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406, (601) 266-6820.

By signing below, you are indicating that you have read this letter and are agreeing to participate in this study. Thank you for your interest in this research study. Through your help in completing this project, we hope to learn more about some of the many facets of diabetes.

Sincerely,

Jacqueline Brown, M.A.

Graduate Student in Clinical Psychology

ID#_______

________________________________ ____________

Signature of parent/guardian Date

Address where you would like gift card sent. If you do not want your child to receive the gift card please leave this blank.

____

____

Please separate this sheet from the questionnaire, **sign**, and place in the small white stamped/addressed envelope, along with your child's signed letter (purple sheet), and place in the mail. Please place this and the questionnaires in the mail by **May 28th, 2007**. Information mailed after this date will not be able to receive the $10 gift card. If you have any questions about this study, please call Jacqueline Brown at 601-266-4588 or email at Jacqueline.B.Brown@gmail.com Thank you!

Address of researcher (in case envelopes are misplaced):
Jacqueline Brown, M.A. c/o
Sara Jordan, Ph.D.
Department of Psychology
University of Southern Mississippi
118 College Drive, #5025
Hattiesburg, MS 39406-5025

Appendix J: Adolescent Letter of Assent for Diabetes Sample

ID#____

Dear Teenager,

Hello and thank you for taking the time to read this letter.

You are being invited to participate in a research study that asks teens and their parent's/guardian's questions about their religious beliefs and coping styles. If you are not religious, that does not matter - you can still participate in this study. If you do not want to participate, that is also fine.

If you would like to take part in this research, please sign your name and make sure your parent or guardian signs their name on the letter that starts with "Dear Parent" (this is because people under 18 must have an adult's permission before participating).Then all you need to do is fill out the attached questionnaires. It should take you about 10-20 minutes to fill out the questionnaires. There are no right or wrong answers. Your responses will be completely anonymous, so please be as honest as possible. After you have completed the questionnaires, please place them in the blank white envelope and then place it inside the stamped/addressed large white envelope that your parent will use to return his or her questionnaires. Once your parent or guardian is finished filling out his or her questionnaires, you can mail them back to me in the included envelope. I will then mail you a **$10 gift card** to Wal-Mart to thank you for filling out the questionnaires. Make sure that your parent lists an address on the sheet they sign so that I know where to send your gift card. In addition to the **$10 gift card**, you will also be helping researchers understand more about how teens feel about religion and how they cope with stressful events. The only possible risk is that you may feel mildly uncomfortable when answering some personal questions. However, this is unlikely to occur.

If you have any questions about the study, please call Jacqueline Brown at 601-266-4588 or email at Jacqueline.B.Brown@gmail.com

Thank you,

Jacqueline B. Brown, M.A.

______________________________ __________

Your Signature Date

Please separate this sheet from the rest of the questionnaire, sign, and place in the small white stamped/addressed envelope, along with your parent's (green sheet), and place in the mail to be mailed back to the researcher. Please place this and the questionnaire in the mail by May 10th, 2007. Information mailed after this date will not be able to receive the $10 gift card. Thank you!

Appendix K

The University of
Southern Mississippi

Institutional Review Board

118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **26102403**
PROJECT TITLE: **Religious Orientation and Religious Coping in Adolescents**
PROPOSED PROJECT DATES: **10/24/06 to 10/23/07**
PROJECT TYPE: **Dissertation or Thesis**
PRINCIPAL INVESTIGATORS: **Jacqueline Beine Brown**
COLLEGE/DIVISION: **College of Education & Psychology**
DEPARTMENT: **Psychology**
FUNDING AGENCY: **N/A**
HSPRC COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF APPROVAL: **10/24/06 to 10/23/07**

Lawrence A. Hosman
Lawrence A. Hosman, Ph.D.
HSPRC Chair

10-27-06
Date

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