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Alice Cathryne Long

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Familial religious practices, religiosity, family connectedness, parent conflict, and their
relation to depressive symptoms in an adolescent sample

By

Alice Cathryne Long

A Thesis
Submitted to the Faculty of
Mississippi State University
in Partial Fulfillment of the Requirements
for the Degree of Master of Science
in Human Development and Family Studies
in the School of Human Sciences

Mississippi State, Mississippi

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Familial religious practices, religiosity, family connectedness, parent conflict, and their
relation to depressive symptoms in an adolescent sample

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In recent decades, research on family life and religion has been conducted. Much of the research done on religion and well-being has shown beneficial effects of religion or religious practices on well-being (Bonner, Koven, & Patrick, 2003; Loser, Klein, Hill, & Dollahite, 2008). Using data from the Flourishing Families Project ($N = 359$ adolescents), the relationship between religious variables (family religious practices, family religious importance and religiosity), family climate measures (family connectedness and parent conflict) and adolescent depressive symptoms was examined. Results indicate no significant relationship between religious variables and adolescent depressive symptoms, but a positive relationship between parent conflict and adolescent depressive symptoms and a negative relationship between family connectedness and adolescent depressive symptoms. These findings suggest that while family climate is important to adolescent depressive symptoms, religious activity as measured by family practices is not protective.

DEDICATION

I dedicate this master's thesis to my family. To my parents, Jolyn and Bill, who always encouraged me and supported me. To my wonderful, loving husband, Dan. You are my rock. You are the voice in my head that destroyed the discouraging voices and critics. You are my everything. This thesis is as much yours as it is mine; thank you. And finally, I dedicate this to my three children, Daniel, Emlyn and Karston. It is my wish that you will see this one day when you are older and that you will know that no good thing comes without hard work and perseverance. Karston, I hope you know that you came to our family at such an unexpected time—right in the middle of my master's coursework and before the thesis was finished, but I would not go back and change a thing. I dedicate this to you, sweet boy, my “Thesis Baby.”

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CHAPTER I

INTRODUCTION

Introduction

In the past several years researchers have identified numerous salubrious effects of religion and religious participation on several aspects of well-being (Bonner, Koven, & Patrick, 2003; Loser, Klein, Hill, & Dollahite, 2008), including depressive symptoms. Adolescent depression is fairly prevalent in the United States, with the highest numbers from 2011 being up to 28.5% of those aged 14-18 years (Centers for Disease Control and Prevention, 2013). The rate of depression among this age group is higher among females (35.9%) than males (21.5%; CDC, 2013). The rate of adolescent depressive symptoms has been established at similar rates (25% for females, 10% for males; Saluja et al., 2004). Of these adolescents who report at least some depressive symptoms, 9% reported their symptoms to be either moderate or severe, and most of these had similar severity of symptoms at the 1-year follow-up (Rushton, Forcier, & Schectman, 2002). Adolescents are particularly susceptible to depressive symptoms for a number of reasons, and symptoms may increase as an adolescent matures (Balbuena, Baetz, & Bowen, 2013). There are many factors that may contribute to or influence the maturation of symptoms of depression in adolescents, including the influence of close relationships (Houlberg, Henry, Merten, & Robinson, 2011). Of particular interest with regard to close relationships are those between adolescents and their parents.

Problem Statement

Research has demonstrated a relationship between depression, well-being, and religion or religious practices (Green & Elliott, 2010; Holt, Wang, Clark, Williams & Schulz, 2013). Private religious practices at the individual level may help to reduce the negative effects of family conflict (Davis & Epkins, 2009). Related research has shown a benefit for religious activities at the family level with regard to increasing feelings of connection between family members as well as increasing overall religiosity (Loser et al., 2009). Depression may be lessened when individuals feel close to their families (Papp, 2012; Yap, Pilkington, Ryan, & Jorm, 2014) or have close relationships with others. Research overall seems to demonstrate a relationship between depression and religious attendance, practices, and beliefs such that people are less likely to have depressive symptoms or are less likely to be depressed when they are religious (Barton, Miller, Wickramaratne, Gameroff, & Weissman, 2013). It follows, then, that families who spend time together engaging in religious activities may be building greater protective effects for depression. While much research has linked depression and religion, almost no research has been done that attempts to make connections across family religious practices, religiosity, closeness of family relationships, and adolescent depressive symptoms. Without understanding how these variables might be interrelated, we cannot fully understand how important family religious practices and family religious beliefs are to reducing adolescent depressive symptoms.

Background of the Problem

Questions about the relationship between religion and depression or mental health have existed for the past several decades in research literature (Green & Elliott, 2010;

Levin & Taylor, 1998; Patrick & Kinney, 2003). Early research sought to establish connections between simplistic measures of religiosity (e.g., number of times a person attends church services in a month) and well-being or mental health (Koenig & Larson, 2001; Levin & Taylor, 1998; Maltby & Day, 2000). As more robust measures of religion and mental health have been developed, research has sought to more deeply examine the relationships among these variables within many different contexts. By and large, much of the research hoping to capture how religion might affect emotional well-being has struggled to define what specifically about religion or religious affiliation may benefit individuals. This is partly because much of the early research has relied too heavily on measures of religiosity that contained only a few questions (Levin & Taylor, 1998).

Recently, studies have attempted to focus on the question of religion and depression/mental health in two ways. First, research has focused on a composite measure of religiosity rather than a simple question of whether or not a person attends church services regularly or self-identifies as religious. Second, research has focused on specific populations rather than one larger group that can be generalized to the entire population. This aspect is particularly important for adolescents, who experience depression differently than do adult populations (Balbuena et al., 2013; Rasic, Asbridge, Kisely, & Langille, 2013). This distinction is important given recent findings that show risks for depression and depressive symptoms increase over the course of the adolescent period (Balbuena et al., 2013; Rasic et al., 2013).

Although research has been working to clarify the relationship between religiosity and adolescent depressive symptoms, much research still needs to be done. This is especially true given the lack of consistent results for significant relationships between

religion and depressive symptoms. The lack of consistency in findings may be due to the multiple factors that may confound the results of the trajectory, strength and development of depressive symptoms. Two recently published meta-analyses examined recently published literature on adolescent depression and found several significant factors that may begin to clarify the relationship between protective factors and adolescent depression. Protective factors are defined as “certain personal and environmental resources that buffer the effects of normative and non-normative stress on health” (Dumont & Provost, 1999, p. 345). Results from one meta-analysis indicate several significant risk and protective factors that adolescents may be able to change themselves (Cairns, Yap, Pilkington, & Jorm, 2014). Some of these are strong, supportive relationships (family relationships, parent-to-child/child-to-parent, romantic relationships, teammates, close friends, other supportive adults such as coaches, teachers or mentors) and physical activity (extracurricular activity, sports participation, exercise). The second recent meta-analysis uses 181 articles that include factors of parenting known to influence adolescent depression (Yap et al., 2014). The authors found that parents who were low in warmth, monitoring, and allowing independence were more likely to have children with higher levels of depression. Both depression and anxiety are most influenced by low parental warmth, more conflict between parents, parents being over-involved or over-protective, and negative reinforcement parenting (punishment). These meta-analyses demonstrate the need for research that accounts for multiple factors that may influence the statistical results of religious practices and family practices on adolescent depression.

Conflicting findings in the literature include varying conclusions about whether religion is a significant influential force on depressive symptoms. In some reports findings did not support the hypothesis that religious beliefs would increase well-being (Patrick & Kinney, 2003), while others seem to indicate that religious beliefs had strong correlations with many facets of well-being (Green & Elliott, 2010; Levin & Taylor, 1998). Unless more research is done in this area, it will be impossible to determine the amount of influence religious beliefs and practices actually have on depressive symptoms.

Purpose

The purpose of the current research project is to clarify the relationship between religiosity and family religious practices, family connectedness, parent conflict and adolescent depressive symptoms. Research on adolescent depressive symptoms has examined religious influences either at the parental level or the individual level but has altogether ignored the impact religious practices done as a family unit may have on adolescent depressive symptoms. It was anticipated that family religious practices done within the context of families will predict lower depressive symptom levels for adolescents. It also was anticipated that family religious practices will predict lower depressive symptom levels when other known predictive factors are controlled for such as income and gender. Finally, it was anticipated that family connectedness and family conflict will not take away the predictive power of the family religious variables when depressive symptoms was regressed on them.

Research Questions

Research Question 1: What combination of religious variables (frequency of faith activities, importance of faith activities, and religiosity) best predicts adolescent depressive symptoms?

Research Question 2: What combination of religious variables and family variables (family connectedness and parent conflict) best predicts adolescent depressive symptoms?

Significance of Study

Recent research has revealed that attending religious services at least monthly is associated with a positive outlook for major depression (Balbuena et al., 2013). Religious attendance has been found to reduce the risk of continued development of depressive symptoms for adolescents—an effect that is stronger for girls than it is for boys (Rasic et al., 2013). No research on adolescent depressive symptoms has been able to establish a link between religious practices (prayer, scripture study, meditation) with improved depressive symptoms over time as most have only examined religious attendance or one question referring to religious importance or frequency of prayer. Further, no research has been done that demonstrates a relationship between family religious variables (religiosity and practices) with any child outcome variable.

Family connectedness between parents and children is important in protecting against depressive symptom development (Houltberg, Henry, Merten, & Robinson, 2011). Additionally, families who are participating in religious activities together may have higher levels of connectedness; therefore it is important to examine both religiosity and family religious practices as separate from family connectedness to determine how

much influence each exerts on adolescent depressive symptoms. Given the scarcity of research on this topic, it is important to further research in this area. Cairns et al. (2014) mention in their meta-analysis that the lack of articles examining religious variables of any kind and adolescent depression shows there is a great need for this research, especially in order to clarify the pathways and causes of depressive symptoms. The need for the research project is apparent in the lack of understanding how much influence religion may have on adolescent depressive symptoms.

Meta-analysis studies point out several significant confounding variables that also should be examined. Without examining these possible confounding variables, it would be impossible to document how much influence family religious activities have on adolescent depressive symptoms. Findings from this study may be used to support prevention work, therapists, school counselors, family counselors, and other family professionals who may not be aware of the effects religion can have for individuals and families.

In the current study, the relationship between religiosity, family religious practices, family connectedness, parent conflict, and adolescent depression will be examined. It is anticipated that family religious practices and high religiosity will provide a high level of family connectedness. The interaction of each of these family-level variables will provide a protective effect on adolescent depressive symptoms. Other common known risk and protective factors also will be examined and controlled for, clarifying the understanding of how much family religiousness can influence both family connectedness and adolescent depressive symptoms.

CHAPTER II

REVIEW OF LITERATURE

Religiosity: Practices and Importance

Religiosity

Religion is often examined in the literature within certain constructs. For instance, in order to answer questions about how people view their own religious practices, researchers used questions aimed at getting people to say what motivates them to continue their religious worship (Neyrinck, Vansteenkiste, Lens, Duries & Hutsebaut, 2006). Internal motivations are linked with internalized methods of religious worship such as prayer while external motivations like fitting in or getting forgiveness or alleviation of guilt from others is more linked with church attendance.

Research examining the relationship of religiosity and both parent and child well-being shows that parental religiosity has a more profound effect for adolescents than for children at earlier stages (Wen, 2014). This may be because adolescents have more predictor control over their own religious practices such as how and when they pray (Holder, Coleman, & Wallace, 2010). Recent research has demonstrated a positive relationship between family-level religiosity and family-level religious practices and child well-being, including the reduction of internalizing behaviors, which include depressive symptoms (Schottenbauer, Spernak, & Hellstrom, 2007). Furthermore, Marks (2004) found that parents perceive family religious practices, such as family religious

holiday celebration, family prayers, and weekly worship activities, are essential to helping children build healthy life outlook as well as improving family relationships. According to Marks (2004) and Loser, Hill, Klein, and Dollahite (2008), many religious parents and families perceive religious beliefs as more than just an arbitrary external influence in their lives. Instead it is viewed as an important piece in the development of individual, family, and social systems.

Adolescent Perception of Religious Importance

Despite literature that shows religion has no protective effect for adolescents against depression, a few studies show that adolescents who attend church regularly have strong feelings that religion is important (Davis & Epkins, 2009; Milot & Ludden, 2009; Sinha, Cnaan, & Gelles, 2007). Females tend to view religion as more important than do males (Milot & Ludden, 2009). Although religious importance was significant at protecting adolescents in some aspects, such as academic motivation, it was not significant at protecting them from depression symptoms (Milot & Ludden, 2009). Adolescents who perceive that religion is important and are more active in religious worship and other religious activities are at a reduced risk for developing problem behaviors including depressive symptoms, which is identified as a risk behavior in this study (Sinha, Cnaan, & Gelles, 2007).

Similar to the finding that religious importance is more salient to adolescent depression is the finding that intrinsic religiosity is more salient to depression than extrinsic religiosity (Possel et al., 2010). Intrinsic religiosity is marked by a person's individual belief that all things in life are motivated by and influenced by personal religion whereas extrinsic religiosity is the belief that religion is not the end but is a

mechanism through which a person worships God (Power & McKinney, 2014). The relationship between intrinsic religiosity and depression is not a bidirectional one so a person's intrinsic religiosity level may protect them against depression, but depression will not influence their intrinsic religiosity level (Possel et al., 2010). Religious practices done in private may play an important role in adolescent depression because practices done in private more closely reflect an adolescent's own beliefs rather than the beliefs of their parents (Davis & Epkins, 2009). While research on adults has found that private religious practices may increase depression (Bonner, Koven, & Patrick, 2003), research with adolescent samples has found no significant relationship with depressive symptoms and private religious practices, religious affiliation, or public religious practices such as religious attendance (Davis & Epkins, 2009).

Depression

Prevalence

In the literature, both depression and depressive symptoms are examined with varying frequency. While literature does make a distinction between depression (a diagnosed psychological disorder) and depressive symptoms (depressed mood), both types of literature use measures that assess depressive symptoms whether or not a diagnosis is present. Adolescent depression is fairly prevalent in the United States, with the numbers from 2011 being up to 28.5% of those aged 14-18 years (Centers for Disease Control and Prevention, 2013). The rate of depression among this age group is higher among females (35.9%) than males (21.5%; CDC, 2013). The rates and risks for developing a depressive syndrome is highest during adolescence, and the trajectory of symptoms can increase throughout this period, potentially leading to life-long depression

problems and repeated depressive episodes (Kouros & Garber, 2014). Even when depression develops early in adolescence, it is important to note that the severity and range of symptoms experienced by an individual can vary greatly over time, giving way to a continuous construct of symptoms rather than a categorical one (Kouros & Garber, 2014). Further, depressive symptoms experienced in adolescence may be cause for concern for the long term as well given that some research has indicated a link with major depressive disorder in adulthood (Pine, Cohen, Cohen, & Brook, 1999).

Several factors put certain adolescents at higher risk for developing or worsening depressive symptoms, including gender (with females having a greater risk than males), weaker family relationships, race, and socioeconomic status (Rushton, Forcier, & Schectman, 2002). One of the most common influential factors influencing adolescent depressive symptoms is parent depressive symptoms (Reinherz, Paradis, Giaconia, Stashwick, Fitzmaurice, 2003). There also may be underlying physical causes that predispose an adolescent to having depressive symptoms, including genetic vulnerability factors that make certain environmental factors more prone to increasing depressive symptoms (Liang & Eley, 2005). Identical adolescent twins were more likely to experience depressive symptoms in conjunction with environmental factors such as parenting and social interactions with peers, but the genetic factor still mediated each environmental factor, showing that genetics influenced how powerful the environmental factor was in influencing depressive symptoms for each individual (Liang & Eley, 2005). Other risk factors identified in the literature include having a parent with depressive symptoms or a diagnosis of a depression disorder (Hooper & Newman, 2011). Symptoms tend to increase with age for both males and females. Adolescents who participate in

bullying behavior either as a participant or as a victim and those adolescents who participate in substance use are more likely to experience depressive symptoms (Saluja et al., 2004). Additionally, families who are in relationships high in conflict also may be at greater risk for adolescents developing symptoms of depression (Davis & Epkins, 2009).

Religion and Well-being

The relationship between religion and well-being has been debated for centuries (see Cohen & Johnson, 2011; Koenig & Larson, 2001 for a brief review). Over the past several decades, much research has explored the relationship between religiosity or religious attendance and psychological well-being (Green & Elliott, 2010; Levin & Taylor, 1998; Patrick & Kinney, 2003). In some reports, findings did not support the hypothesis that religious beliefs would increase well-being (Patrick & Kinney, 2003), while others seem to indicate that religious beliefs had strong correlations with many facets of well-being (Green & Elliott, 2010; Levin & Taylor, 1998). One apparent weakness often cited in literature examining the variables of religion and well-being is the use of multiple measures of religiosity, none of which measure the same thing. Some use a measure of religious beliefs (Patrick & Kinney, 2003). Others use a measure of religious involvement or religious attendance (Levin & Taylor, 1998). Other studies focus on religious affiliation or denomination association (Green & Elliott, 2010). Still others are even more vague and choose only to identify their religious measure as religious behavior or practices (Holt, Wang, Clark, Williams, & Schulz, 2013). The general measures of well-being are more consistent, including aspects of work and family, social relationships, financial stability, physical health, and psychological well-being. One recent study done on religion and well-being among Americans by Gallup

demonstrated that religion and well-being are related even after controlling for common demographic factors that influence both religion and well-being (Newport, Witters, & Agrawal, 2012). The study found that Americans who identified as highly religious were more likely to score well on well-being measures. Social network scores may have been higher because church attendance allows the growth and support of a social network to occur. Additionally, religious practices often require more meditative states such as during prayers. Meditation has been shown to reduce stress depression and to promote happiness (Newport, Witters, Agrawal, 2012). Religious people are also more likely to make healthy choices such as not smoke and eat a well-balanced diet, so that also may be a reason for the strong correlation between religion and well-being in this study. The lack of consistency in religious measures used in the literature presents a problem that can be addressed through employing more homogenous instruments in future research studies.

Religion and Child Well-being

One weakness of general studies of religion and well-being of children is the use of religious measures that only take into account the parents' religiosity and not the predictor religiosity of children themselves. Some literature does a better job of this, however, and there is more literature available when adolescents are the sample rather than younger children. One study by Holder, Coleman, and Wallace (2010) examined the happiness and well-being of children aged 8 – 12 years old along with religious attendance and spirituality—measured using a religious practices and beliefs scale that included how often respondents prayed or meditated. Findings in this study showed that no strong correlations existed between religious attendance and well-being or happiness, but there was a strong relationship between spirituality and happiness. Thus it may be

important to examine religiosity as two constructs, one of religious practices related to attending church services and one for spirituality that includes private religious worship activities such as prayer, meditation, and private scripture study.

Three other studies examined the influence of parental religiosity on child well-being. Bartkowski, Xu, & Levin (2008) sought to find if religiousness of parents hurt the development of children and found that it is perhaps not the religion itself but the family disagreement about religion that can be deleterious for children's well-being. They also discuss the idea that there is a difference between religiosity in general and the qualitative religiosity within the family (how devoted they are to practices and worship service attendance). Generally, this study found that religion can be negative for children; however, the authors determined that too many factors come into play when the outcome of child development is the question. Meanwhile, Petts and Knoester (2007) found that, when parents have different religious backgrounds, their child is more likely to participate in illicit drug use and high levels of conflict in the home are more likely. When parents have different religious affiliations, the family is less likely to attend church together. This also increases the conflict in the home as well as the likelihood a child will participate in deviant substance use behavior. The third study, done by Wen (2013), found that parents and children from financially struggling families are not likely to benefit from religious attendance, even when this group may attend more often. Wen explains this by saying that the religious attendance may have been spurred by the onset of the family's financial distress; thus, the negative correlation is more a function of the idea that people seek God and religion when they are in distress. Furthermore, according to Wen, the idea that religion will benefit all families is an overstatement of the evidence

because there are too many other factors that may influence well-being, such as parenting attitudes and parent mental well-being.

Religion and Depression

The association between mental health and religion has been under debate for decades (Koenig & Larson, 2001). Research has indicated both positive and negative relationships between depressive symptoms and religion (Bonner, Koven, & Patrick, 2003; Holt, Wang, Clark, Williams, & Schulz, 2013). Research overall seems to indicate a relationship between religious attendance, practices, and beliefs and depression such that people have less depression when they are religious (Barton, Miller, Wickramaratne, Gameroff, & Weissman, 2013). A study done by Bonner, Koven, and Patrick (2003) demonstrates a relationship between types of religious behavior and depression outcomes. Specifically, researchers found that higher depressive symptoms were associated with a higher level of private religiosity. This finding may be simplifying the complexity of the relationship between these variables. An example of this is that while the frequency of prayer was measured the types of prayer were not. The authors suggest that prayers asking for help may be offered as often as prayers offering praise and gratitude and point out that the nature of the prayer, or the specific ways that people express their prayers, may matter to the outcome of depressive symptoms.

Barton et al. (2013) found that frequently attending religious services may protect against major depression, even for people who struggle in social interactions, thus eliminating the idea that religion is only beneficial to depressive symptoms because it gets people involved socially thus expanding their network of support. However, this protective quality of religious attendance does not appear to help those whose parents

also suffered from depressive symptoms, suggesting that heredity is a stronger predictor of outcomes than personal beliefs. Social networks and religiosity have been examined in research done by Wilmoth, Adams-Price, Turner, Blaney, and Downey (2014) with a population of aging persons. This study found results similar to Barton et al. (2013) and reflect that religious worship increases well-being above and beyond the benefits provided by social connections. Another study that examined religiosity and depressive symptoms used a sample of 83 young grandmothers and found that higher religiosity was associated with lower depressive symptom scores, which could mean that religiosity is helpful for these women in coping with their issues (Brown, Caldwell, & Antonucci, 2008). African American grandmothers in this study reported higher religiosity but also higher depressive symptoms. The authors suggest that, given the white grandmothers in this study were more likely to be married and have higher income than the African American grandmothers, the white grandmothers probably had more access to support resources. Even so, the African American grandmothers still benefitted from religiosity, suggesting that it is a helpful support mechanism for them (Brown, Caldwell, & Antonucci, 2008).

By and large, few studies have examined religiosity and adolescent depression in a way that captures the multiple ways that adolescents may practice religion (Sinha, Cnaan, & Gelles, 2007). One study shows that religious participation can protect adolescents from depression (Rasic, Kisley, & Langille, 2011). Results were stronger for females in this sample than for males and varied based on the type of religious measure. Males were protected more by feeling that religion was important while females were more protected by regular attendance of religious services. A similar study found gender

differences in rates of future likelihood that an adolescent would develop depression. Girls were protected against depression if they attended religious services regularly, and boys were protected from worsening depression but also were less likely to attend religious services regularly if their depression levels were higher (Rasic et al., 2013).

Not all research linking religion and depression shows such positive results. Research reporting negative mental health as a result of higher religious attendance began in the 1950s and 1960s and has continued into more recent literature as well (Koenig & Larson, 2001). More recently, one study found that religious orientation is linked with higher depression scores. Those who have higher rates of depression are also less likely to have intrinsic religiosity, optimism, and support-seeking coping styles (Maltby & Day, 2000). The fact that depression is linked with religion in a negative way in this study, despite the social and cognitive factors that often influence depression, negates the argument of turning to religion for coping with depression (Maltby & Day, 2000). In fact, Maltby and Day (2000) mention that their results mirror those of 23 other previous studies on the subject. Another study found a relationship between parents with higher depressive symptoms and adolescents with higher depressive symptoms but no relationship between depressive symptoms from either group and family religious involvement (Hooper & Newman, 2011).

More neutral findings were reported in a more recent study that found no significant relationship between severity of levels of depression and a person's religious level whether they were very religious or non-religious (Baker & Cruickshank, 2009). This study has multiple limitations that may account for the differences in the results obtained. The data collection was done during an important Islamic holiday, which could

have affected the scores of those affiliated with Islam. Additionally, the diverse cultural background of the sample may have indicated no significant relationship when indeed a relationship may have been only dependent on specific religious practices that were not examined (Baker & Cruickshank, 2009). Those of Christian faith background were not more or less likely to have depressive symptoms than those from backgrounds of other faiths, although those in this sample who frequently are involved in religious practices did have partial protection from depression. Perhaps the biggest limitation of this study is the use of the Depression-Happiness Scale. The authors report that this scale has been demonstrated to be unsuitable for studying depression along with religious variables and that another, more comprehensive depression inventory might be more appropriate and have different results.

Despite the long-standing debate in the literature on the topic, it remains that multiple studies have found that people often turn to religion for coping through stressful times, including times of mental distress such as depression (Koenig & Larson, 2000; Loser et al., 2009; Marks, 2004). Although the findings are anything but consistent, it is important to note that religion itself may not be the only factor involved in developing well-being. Much of the research on religion and depression is limited by the lack of comprehensive measures of religiosity, religious attendance, or private and public religious practices. The studies mentioned here look at some of these aspects of religion and religious living, but none examine all in a way as to capture the nuanced differences that certainly exist across individual lives or even denominations of religions.

Family Climate and Depression

Connectedness

Parenting practices may have something to do with how depression develops among adolescents. Certain parenting behaviors may predict depression among adolescent girls (Hipwell et al., 2008). Low parental warmth is still a strong predictor of girls' depression after poverty is controlled for (Hipwell et al., 2008). Typically, families who come from low-income backgrounds are more likely to have family members with depression issues, and the same is true for adolescents (Dwairy & Achoi, 2010; Hipwell et al., 2008). Families who are secure financially are less likely to have an adolescent child with depression, and adolescents who come from families who are connected are also less likely to have depression (Dwairy & Achoi, 2010). Too much connection between family members, however, can increase the risk of depression because this leads to an adolescent's being criterion upon parents for feelings of well-being (Dwairy & Achoi, 2010). An important study examined family connectedness and found that adolescent depressive symptoms and emotional well-being are benefitted by connectedness in family subsystems, specifically between mother and child and father and child subsystems (Houltberg et al., 2011). A study of Mexican-American adolescents had similar results and reported that adolescents had lower levels of depression when parents were warm and accepting and had less strict parenting practices (Ozer, Flores, Tschann, & Pasch, 2011). Parents who are overprotective and lack warmth or nurturing behavior are more likely to be raising adolescents with high levels of depression (Betts, Gullone, & Allen, 2009). A recent meta-analysis using 181 articles studying parenting factors that have associations with adolescent depression found that parents who were

low in warmth, monitoring, and allowing independence were more likely to have children with higher levels of depression (Yap et al., 2014). Both depression and anxiety are most influenced by low parental warmth, more conflict between parents, parents being over-involved or over-protective, and negative reinforcement parenting (punishment; Yap et al., 2014).

Conflict

Family conflict is likely to adversely affect adolescents. A review article recently noted how many domains of adolescent development are affected by conflict in the home (Cumming & Davies, 2002). Everything from biology to psychology can be influenced when adolescents are being raised in a highly conflictual home (Cummings & Davies, 2002). Youth in particular are sensitive to family conflict (Timmons & Margolin, 2014). Findings from this study show that adolescents who live in a highly conflictual home are more anxious and depressed (Timmons & Margolin, 2014). Individuals who are depressed are also more likely to have hostile feelings toward family members and to withdraw socially (Shelton & Harold, 2008). When parents are depressed, they are more likely to experience conflict with their spouse, which in turn contributes to increased depressive symptoms (Shelton & Harold, 2008).

Parenting skills can help to reduce the adverse effects of conflict on adolescents with regard to depressive symptoms (O'Donnell, Moreau, Cardemil & Pollastri, 2010). Not all conflict is detrimental to development as written about by Du Rocher Schudlich et al. (2015), who examined the relationships of 74 couples and coded their conflict interactions as either positive or negative. They found that mothers and fathers attempted to have negative conflict away from their children but did not conceal constructive

conflict, which shows that the child still observed conflict behavior of the parents. For these couples, mothers who scored higher on depressive symptoms were also more likely to feel adversely affected by the conflict and were also more likely to engage in negative conflict (Du Rocher Schudlich et al., 2015). Adolescents who perceive high levels of conflict in the home are more likely to score high on depressive symptom scales, and the reverse also has been shown to be true (Briere, Archambault & Janosz, 2013). While these findings are compelling, it should be noted that mothers and fathers were not scored separately and family structure also was not examined, all of which could influence adolescent depression scores (Briere, Archambault & Janosz, 2013). Family conflict levels are also influenced by external forces including social stressors, and life circumstances such as loss or financial problems (Briere, Archambault & Janosz, 2013).

Another cause of family conflict is religious differences between parents such that when parents belong to and are devout in different religions they are likely to argue about where to go to church, and this can adversely affect child well-being (Petts & Knoester, 2007). While conflict can have negative results and increase depressive symptoms for adolescents, one study found that adolescents who practice religion privately (i.e., pray often, meditate) were protected from the conflict and had lower depressive symptom levels than those who did not participate in private religious practices (Davis & Epkins, 2009).

Theory

Family and Religion

Ecological systems theory has been used to examine family connectedness and family religious behaviors. One model based on ecological systems theory included

empirical findings that suggest that religion has important internal influences within the family as well as within broader social systems (Loser, Klein, Hill, & Dollahite, 2008). The model suggests that families who practice religion together are likely to build strong relationships, feel closer together as a family, and have better communication, family unity, support, and parenting, as well as decreased contention, clear expectations, and a warmer familial atmosphere. Given that religious practices as a family may influence family closeness and family closeness in turn has been shown to influence adolescent depression (e.g., closer family relationships decrease likelihood of depression), this theory would be a good fit for this project.

Resilience

Additionally, it is important to define how certain factors may protect adolescents from depressive symptoms. Protective factors are “certain personal and environmental resources that buffer the effects of normative and non-normative stress on health” (Dumont & Provost, 1999, p. 345). Protective factors for adolescent depressive symptoms include parenting styles (Muris, Schmidt, Lambrichs, & Meesters, 2001), social relationships, and self-esteem (Nguyen & Rawana, 2011). It is important to define how certain factors may either put adolescents at risk for depressive symptoms or protect adolescents from symptoms developing or worsening over time. Protective factors have been discussed previously in this document, and it is pertinent to provide an explanation of the theoretical construct of these factors. Protective factors for adolescent depressive symptoms include parenting styles (Muris, Schmidt, Lambrichs, & Meesters, 2001)—low psychological control (Ozer, Flores, Tschann, & Pasch, 2013) and high parental monitoring (Yap et al., 2014)—social relationships, self-esteem (Nguyen & Rawana,

2011), and private religious practices (Davis & Epkins, 2009). Risk factors include having a parent with depression (Field, Diego, & Sanders, 2001; Hooper & Newman, 2011; Sheeber, Hops & Davis, 2001), parental discipline, and interparental conflict (Yap et al., 2014; Papp, 2012). Risk and protective factors provide a construct for resilience theory that states that, although human beings encounter stressful and difficult circumstances, they are able to overcome the negative effects of these circumstances and have minimal impact on their long-term well-being outcomes (Fletcher & Sarkar; 2013; Fergus & Zimmerman, 2005). Individual resilience is defined not only by positive outcomes but also by a combination of risk factors, protective factors, and positive outcomes (Fergus & Zimmerman, 2005). Given this theory's focus on specific aspects of life that either protect a person or put them at risk for a particular outcome, it is proposed that resilience theory be used to explain the findings in this study.

CHAPTER III

METHODS

Introduction

Many family life processes that are affective in nature influence positive development outcomes for individuals and families (Kim, Capaldi, & Crosby, 2007). It is important to explore the ways that these affective processes may protect against negative outcomes like adolescent depressive symptoms. Research has repeatedly demonstrated how family-level practices, both religious and non-religious, are valuable for individual development and well-being. Some research has sought to make connections between mental health and religion—and depression and religion—but to date almost no research has examined how religiosity and family religious practices might influence the development of depressive symptoms for adolescents (Yap et al., 2014). Additionally, gaps exist in the literature with regard to the examination of factors that also may be related to the existence of depressive symptoms. Without understanding how other factors might be interrelated, we cannot fully understand how important family religious practices are to protecting adolescents from developing depressive symptoms.

The current research project seeks to clarify the relationship between religiosity, family-level religious practices (both frequency and importance), and depressive symptoms for adolescents. Secondary to this, the current project also seeks to clarify how the closeness of family relationships may influence adolescent depressive symptoms by

examining how both family connectedness and parent conflict are related to the religious variables and how they are related to adolescent depressive symptoms. Past research examining adolescent depressive symptoms has shown strong relationships with religiosity of parents (Bartkowski, Xu, & Levin, 2008; Power & McKinney, 2014; Wen, 2014) or personal religious practices of adolescents (Holder, Coleman, & Wallace, 2010), but none has examined adolescent religiosity and family-level religious practices. In order to answer what influence family religious practices may have on depressive symptoms for adolescents, the current research study uses a secondary longitudinal survey and qualitative measures dataset. The Flourishing Families Project (FFP) was designed to investigate how certain family processes impact the development of young people, particularly at the social domain. Family processes were measured using observational and survey techniques.

Research Design

The data for this project are taken from secondary data provided by FFP. The research design utilizes a mixed methods approach with survey and observational data, depending on the instrument used. The qualitative/observational elements of this dataset have been pre-coded by the principal investigators, and no further coding was utilized for these portions. The quantitative elements utilized were scored and statistically analyzed for reliability based upon the parameters set by the original data owners. For this project, the third wave of available data was used. The third wave was chosen because the ages of adolescent participants at this time point range from 12 – 17 years, which is a range that closely mirrors the ages provided in the most recent national reports on depression prevalence (CDC, 2013). The purpose of the design is to determine how much influence

family-level religiosity, family religious practices (frequency and importance), and individually perceived family connectedness and parent conflict may have on predicting depression symptom levels of adolescents. In the current study, demographic variables also were examined to control for known factors that also might predict depressive symptom levels, including combined household income, gender, ethnicity, and child's age.

Population and Sample

The participants for this study were taken from wave 3 of the FFP. The FFP is a longitudinal study that examines the internal family life of families with a child between the ages of 12 and 17. The sample includes 459 families, which is a 91.8% retention rate from Wave 1 (321 two-parent families and 138 single-parent families). After missing cases were eliminated listwise as part of the statistical analyses, the final sample of adolescents was $N = 327$. The average age of children in the sample was 13.3 years of age; mothers' age averaged 45.2 years, and fathers' age averaged 47.3 years. The ethnic background of the sample was 298 families from European American ethnicity and 56 from African American, with fewer for Hispanics (1) and Asian Americans (4). Eighty-nine families are categorized as multi-ethnic, based on a combination of two or more ethnicities among family members. In terms of parental education, 60.9% of mothers and approximately 69.7% of fathers had a bachelor's degree or higher. The reported annual family income for the sample breaks down as follows: 22.6% of families reported making less than \$59,000; 32.8% reported income in the \$60,000 – 99,000 range; 29.9% reported income of \$100,000 – 149,000; and another 14.7% reported making \$150,000 or more per year. Approximately 32% of single parents had never been married, 8.7% were

separated, 49.3% were divorced, and 4.3% were widowed. For the child group of the sample, there were 238 males (47.6%) and 251 females (50.2%), with 11 missing cases accounting for the remaining 2.2%. Some child data were gathered by questioning Parent 1. These include child gender, ethnicity, combined income, and education of parents. When missing cases exist, it means that either the parent declined to answer, as is the case with child gender, or the adolescent declined to answer. Reasons for declining to answer are not documented in the researchers' codebook so this information is unavailable.

Data Collection and Procedures

Families who participated in the FFP were chosen from a large northwestern city, and initial interviews were conducted within the first 8 months of 2007 for the Wave 1 data sample. After the initial interviews, annual interviews were conducted, with Wave 3 data collected in 2009. Recruiting was based on a list purchased from a national telephone survey database (Polk Directories/InfoUSA). Families were randomly selected from census tracts that were similar to the socioeconomic and racial distribution reported by local school districts. All the families having a child between the ages of 10 – 14 and living within the census areas were eligible to participate in the FFP. The total number of eligible families was 692, and of these 423 agreed to participate in the FFP, resulting in a 61% response rate. A weakness of using the Polk Directory national database was that it is generated by using telephone, magazine, and Internet subscription reports, making families from lower socioeconomic status underrepresented. Given this fact, 77 additional families in the area were recruited using fliers, referrals, and other means so that families of lower socioeconomic status make up 15% of the final population sample.

Each of the families was contacted using multiple stages of recruitment. First, a letter was sent out to potential families introducing them to the general project; the families recruited using fliers did not receive a letter. Second, interviewers made phone calls and house visits to confirm family participant eligibility and willingness to participate. After each family had consented and been confirmed as eligible to participate, interviewers made appointments and visited each family in their home to conduct an assessment interview, which included a videotape of family interactions as well as questionnaires that were finished in each home. Families gave reasons for not wanting to participate in the study, including lack of time and concerns about privacy. There are very few missing data. When interviewers had collected each segment of the in-home interview, questionnaires were screened for missing answers and double marking.

Measures

The study measures are included in the following paragraphs (see Appendix for complete scale items). Each measure was assessed at Wave 3 unless otherwise noted.

Demographics

The sex of each participant was recorded at Wave 3, and each parent answered for themselves, with Parent 1 answering for the child. Gender was coded as male = 1, female = 2. Child age was not assessed at the time of Wave 3 data collection. Therefore, the age of the adolescents was calculated using SPSS formulas using the child's birth year and the year of data collection for Wave 3 (e.g., 2009 – 1997 = 12). Ethnicity was recorded by the principal investigators at Wave 2 and not in Wave 3 because researchers assumed this would not change in subsequent waves. Child ethnicity was determined by utilizing

answers from Parent 1 about their child's ethnicity. Ethnicity was recorded into six potential categories: European American = 1, African American = 2, Hispanic = 3, Asian American = 4, other = 5, Multi-ethnic = 6. Income was recorded at each wave of data collection. Parent 1 and Parent 2 respondents were asked about their household income separately in Wave 1 and Wave 2. At Wave 3, to avoid the discrepancies in numbers that emerged in previous waves, respondents were asked to work together with their partner (when a partner was present) to determine the number that best reflected their combined household income.

Religiosity

The influence of religion and spirituality on adolescents and parents was measured using items from the Santa Clara Strength of Religious Faith Questionnaire (Lewis, Shevlin, McGucklin, & Navratil, 2001). Adolescents responded to 4 questions based on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Sample questions include, "I pray daily" and "My faith impacts many of my decisions." Higher scores show a larger degree of perceived influence of religion on identity, meaning, life decisions, and religious behaviors. The original measure reported reliability to be .93 on Cronbach's alpha (Lewis et al., 2001).

The scale was shortened for the FFP. Additionally, researchers added two open-ended questions to capture religious attendance at dedicated religious services as well as religious practices done at home. This measure is designed to address religious and spiritual influence on each respondent's life and identity. The original scale included 10 items; however, it was shortened for this study to 4 items, eliminating items 1, 3, 5, 7, 8,

and 9 due to questionnaire length concerns. Cronbach's alpha score for the current sample was found to be .94.

Family Religious Practices

Family-level religious practices including prayer, scripture study, and religious conversations are measured using the short version of FAITHS (Lambert & Dollahite, 2008). The short version (9 items) was used from the authors' original 18-item scale (Lambert & Dollahite, 2010). This scale assesses both the importance and the frequency of religion. The frequency of family religious practices was measured with a range on a 7-point Likert-type scale from 0 (never) to 6 (more than once a day), and responses for religious importance range on a 5-point Likert-type scale from 0 (not important) to 4 (extremely important). Higher scores indicate higher frequency and importance of family religious practices. The original FAITHS scale has been tested in previous studies on three samples with resulting coefficient alphas ranging from .88 to .94, demonstrating good consistency. In these same samples, FAITHS was moderately correlated with other measures of religiosity, such as intrinsic and extrinsic religiosity and prayer behavior, and was not correlated with social desirability. Thus, FAITHS demonstrates adequate convergent and discriminate validity. Finally, the results of a test-retest reliability indicated high reliability $R^2(159) = .86, p < .001$. These results demonstrate that FAITHS is a reliable and valid measure (Lambert & Dollahite, 2008). Cronbach's alphas for the current study were found to be .93 for frequency and .94 for importance for the adolescent sample.

Family Connectedness

Family connectedness in this study refers to the degree the child feels socially connected to each parent (Lee, Draper, & Lee, 2001). Connectedness from the child perspective was measured using a six-item scale adapted from a general social connectedness measure. The child answered each question once for each parent. Sample scale items included, “Even though I am very close to my parent, I feel I can be myself” and “I am comfortable with some degree of conflict with my parent.” Responses ranged from 1 (strongly disagree) to 5 (strongly agree). Higher scores indicated a higher degree of parent-child social connectedness. Cronbach’s alpha coefficient for the original scale was previously found to be .78 (Lee, Draper & Lee, 2001), while coefficients were found to be .80 in relation to Parent 1 and .76 in relation to Parent 2 for this research sample.

Parent Conflict

The parent conflict measure indicates the level of the child’s exposure to conflict between their parents, and triangulation refers to how frequently the child is felt caught between the parents. This variable was measured using a 10-item scale modified from the Children’s Perception of Interparental Conflict Scale (Grych, Seid, & Fincham, 1992). Children were asked how true they felt a series of statements was for them, with a scale of responses ranging from 1 (never) to 5 (always). Statements scored by participants included “I see my parents arguing or disagreeing” and “I feel caught in the middle when my parents argue.” The higher scores a child received indicated a higher level of child-perceived parental conflict and higher levels of triangulation as perceived by the child. Cronbach’s alpha coefficient for the original scale was .70 for parental conflict frequency subscale and .71 for the triangulation subscale (Grych, Seid, & Fincham, 1992). An

overall alpha score for the original scale is not available. For the current project sample, the Cronbach's alpha for the overall scale was .85.

Adolescent Depression

Children's depression was assessed using the 20-item self-report CES-DC (Center for Epidemiological Studies Depression Scale for Children; Weissman, Orvaschel, & Padian, 1980). Participants responded to each item using a Likert-type scale ranging from 1 (not at all) to 4 (a lot) corresponding to the degree they felt they had experienced each item during the past week. Higher scores correspond to higher levels of depressive symptoms. Sample items included "I was bothered by things that usually don't bother me," and "I felt lonely, like I didn't have any friends." For this current study's sample, the Cronbach's alpha reliability coefficient was .92.

A proposal to use the FFP dataset was submitted in December 2014 and was approved by the primary research committee during the same month (see Figure 1). An IRB application was submitted in April 2015 and in the same month the project was deemed exempt from review (see Figure 2). Data were received via email as an IBM SPSS 22.0 file in January 2015. Before analysis could begin, certain items were reverse coded in accordance with the guidance from the FFP Codebook, including certain items on both the parent and child depression scales. After reverse coding was accomplished, reliabilities were conducted for each scale. After reliabilities were finalized, the next step was to run a simple correlation analysis between all the variables in the study, including all control, predictor, and criterion variables. Correlation analyses helped guide the building of three regression models. For step one of the regression analysis, the demographic variables were added first, including combined household income, gender,

ethnicity, and age. This acted as a method of controlling for these variables in later steps. For step two of the regression analysis, the family religious variables religiosity, frequency of faith activities, and importance of faith activities were added. Finally, for the third step, the family variables were added, including parent conflict and family connectedness. The variables were analyzed using a manual enter method in SPSS 22.0. As is requisite with secondary data analysis, care was taken to maintain ethical use of the data and to not violate any of the agreements for using the FFP as set forth by the principal investigators.

CHAPTER IV

RESULTS

The purpose of this study was to determine whether religiosity, family religious activities, and importance of religion predicted depressive symptoms for adolescents and whether perceived levels of family connectedness and parent conflict in combination with religious variables likewise predicted depressive symptoms for adolescents. Based on the literature review, two research questions were designed to answer what best predicts depressive symptoms for adolescents. Research question one is “What combination of religious variables (frequency of faith activities, importance of faith activities, and religiosity) best predicts adolescent depressive symptoms?” It was anticipated that family religious practices would predict lower levels of depressive symptoms for adolescents. It also was anticipated that the predictive power would remain after controlling for demographic characteristics of the sample. Research question two was designed to get a better picture of what other factors might have an influence on the depression symptom scores of the sample: “What combination of religious variables and family variables (family connectedness and parent conflict) best predicts adolescent depressive symptoms?” It was anticipated that, of the demographic, religious, and family variables, the religious variables would be the best predictors of decreased depression symptoms. It was further anticipated that the protection provided by the religious variables would

remain as family connectedness and parent conflict were added into the regression model after controlling for demographic characteristics in the sample.

Selecting Statistical Analyses

When selecting an analysis method, several potential options emerged. One of these was structural equation modeling (SEM), which has been a popular method of analysis in the social and behavioral sciences in recent years. While SEM is a highly regarded method for analysis, other recent research projects have utilized multiple regression analysis. Given the popularity of multiple regression in the social sciences and its use in recent studies examining similar subject matters (Hooper & Newman, 2011; Houltberg et al., 2011), it was decided that multiple regression analysis was a useful and valid method for analyzing the current study's data.

Preliminary Analyses

Descriptive Statistics and Meeting Assumptions

First, descriptive data were examined including means and standard deviations for the variables under consideration. Table 1 displays the correlations, Cronbach's alpha coefficients, ranges, means, and standard deviations of all the variables. Given the size of the sample ($N = 327$), heteroscedasticity was unlikely (Allison, 1999). In order to make certain that the chosen primary statistical analysis was appropriate for the data, assumptions of multicollinearity and homoscedasticity were tested using SPSS statistical software version 22.0. First, the tests for homoscedasticity were conducted using output coefficient tables for tolerance. The VIF and tolerance scores were within acceptable ranges (Allison, 1999) except for the FAITHS frequency and FAITHS importance

variables. While these variables produced worrisome tolerance values, it is important to note that correlation between these variables was expected given the closeness of the questions. Therefore, analysis was deemed appropriate and proceeded accordingly. Some research indicates that centering all variables at zero will help alleviate problems with multicollinearity (Allison, 1999), but more recent work from statisticians in the social sciences indicates that this method does not actually control for multicollinearity (Shieh, 2010; Shieh, 2011) so analysis proceeded without creating standardized variables.

Another method for testing multicollinearity in multiple regression analysis is perform a separate regression between only the predictor variables (Allison, 1999; Allison, 2012; McDonald, 2014). The strength of multicollinear relationships is acceptable if the resulting R^2 values are less than .60, (Allison, 1999; Allison, 2012; McDonald, 2014).

This test was performed as part of the preliminary analyses. All the values were either at or below .60 which is considered acceptable (Allison, 2012). Multicollinearity was strongest with the religiosity variables, which is not at all surprising given that these items measure similar things. Furthermore it would be more concerning if there was no relationship between religious variables as that would indicate that they are not good indicators of religiosity or religious behavior.

Correlations

Simple correlations were conducted between the criterion variable, predictor variables, and the extraneous variables. For adolescents, depressive symptoms was significantly and positively correlated with parent conflict ($R = .305, p < .001$), ethnicity ($R = .098, p < .05$), and the child's gender ($R = .092, p < .05$). Adolescent depressive symptoms was significantly and negatively correlated with annual household income (R

= -.130, $p < .001$) and family connectedness ($R = -.291, p < .001$). No significant relationships were uncovered between adolescent depressive symptoms and the other predictor variables of family religious activities frequency, family religious activities importance, and religiosity. Several interactions emerged between the control variables and the predictor and criterion variables. Of these interactions, the most compelling were those between depressive symptoms and gender ($R = .092, p < .05$), depressive symptoms and income ($R = -.130, p < .001$), and depressive symptoms and ethnicity ($R = .098, p < .05$). Income was negatively correlated with religiosity ($R = -.167, p < .001$), FAITHS activities frequency ($R = -.229, p < .001$), and FAITHS activities importance ($R = -.194, p < .001$). Income also was significantly correlated with the predictor variables of family connectedness ($R = .210, p < .001$) and parent conflict ($R = -.237, p < .001$). Finally, the importance of religious activities also correlated positively with ethnicity ($R = .101, p < .05$) and negatively with age ($R = -.089, p < .05$).

The correlations revealed significant relationships between several of the predictor variables but not all of them. As expected, the FAITHS variables were significantly correlated with religiosity. Religiosity positively correlated with faith activities frequency ($R = .677, p < .01$) and with faith importance ($R = .728, p < .01$), and faith activities frequency positively correlated with faith importance ($R = .870, p < .01$). Family connectedness was negatively correlated with parent conflict, which was also an expected result ($R = -.225, p < .01$). While some statistical literature indicates that significant correlations between predictor variables (multicollinearity) is grounds for multiple regression not being a good statistical test (Preacher, Curran & Bauer, 2006), not all social science statisticians agree with this logic (Shieh, 2010; Shieh, 2011). Therefore

it was determined that multiple regression was still an acceptable statistical test to perform, and this analysis was subsequently conducted.

Primary Analysis

Multiple Regression

Multiple regression analysis was used to determine whether depressive symptom scores for adolescents were predicted by the chosen predictor variables (e.g. religiosity, frequency of family religious practices, importance of family religious practices, family connectedness and parent conflict). Results of the regression models are displayed in Table 3. For adolescents in this study, the criterion variable (depressive symptoms) was anticipated to be predicted primarily by religiosity, family faith activities frequency, and family faith activities importance. Secondary to this, depressive symptoms were anticipated to be predicted by parent conflict and family connectedness.

For step one of the regression model, the demographic variables, including combined household income, gender, ethnicity, and age, were added first as control variables. These variables accounted for 3.6% of the variance in the regression model, $F(4, 322) = 2.969, p < .05$ for depressive symptom scores. Beta scores for this step of the regression indicate that only income was a significant predictor ($\beta = -.119, p < .05$). In step two, the family religious variables, including religiosity, frequency of faith activities, and importance of faith activities, were added, accounting for 3.6% of the variance in the regression model; these levels failed to reach significance, $Fchange(3, 319) = .081, NS$. Again in this step of the regression equation only income was a significant predictor ($\beta = -.125, p < .05$).

Finally, for the third step, the family variables were added, including parent conflict and family connectedness, accounting for 16.3% of the variance in depressive symptoms in the regression model, $F(2, 317) = 23.939, p < .01$. While the first and last models were statistically significant, the percent of change in variance between the second and third models was 12.6%, and the percent of change between the first and second models was only .1%. Therefore the addition of the religious variables was not significant. Beta scores for the third step of the regression equation revealed three significant predictors. Ethnicity ($\beta = .077, p < .05$), parent conflict ($\beta = .242, p < .01$), and family connectedness ($\beta = -.239, p < .01$) were all significant predictors in the regression model.

CHAPTER V

DISCUSSION

Explaining Correlations

There are many potential explanations for the correlations that emerged. The strongest correlation emerged between depression and perceived parental conflict. This positive correlation indicates that depression is more likely in a household that has a high amount of perceived conflict between parents. This echoes what has been discovered in previous research (Timmons & Margolin, 2014). Also echoed in the literature were the positive correlations between gender and depressive symptoms and the negative correlation that emerged between depressive symptoms and combined household income (Rushton, Forcier, & Schectman, 2002). The positive correlation between gender and depressive symptoms shows that those adolescents that were female had a greater chance of scoring high on the depressive symptom scale. The negative correlation between combined household income and depressive symptoms indicate that lower-income families were more likely to produce an adolescent child with higher depressive symptom scores. Finally, there was a negative correlation between depression and family connectedness, indicating that low amounts of family connectedness are linked with higher depression levels. This finding was not surprising given that other research has also uncovered this relationship (Houltberg et al., 2011).

Several predictor variables were significantly correlated. Income negatively correlated with all three religious variables which indicates that when income was low the adolescent had a higher chance of being religious, doing religious activities with their family, and feeling that religious activities were important to their family. Income was also negatively correlated with parent conflict indicating that when income was low, conflict was high. Only one variable positively correlated with income, which was family connectedness. This correlation indicates that when income was high there was a higher level of connectedness. Ethnicity was significantly correlated with importance of faith activities. This indicates that those from minority groups were more likely to view faith as important. Finally, family connectedness negatively correlated with parent conflict indicating that when there are low perceived feelings of connection between parents and children there is a higher chance of conflict in the home.

Contrary to what was anticipated, no significant correlations emerged between depressive symptoms and any religious variable. There could be several explanations for this. One possible explanation is the scores for depression being relatively high for this sample ($M = 32.3$, $SD = 10.36$) as compared to other studies with similar samples and using the CES-D (Briere, Archambault, Janosz, 2013; Mason et al., 2009). Age is also a possible factor in these results as this sample was young ($M = 13.3$, $SD = 1.08$); depression symptoms tend to worsen during adolescence with age (Pine et al., 1999). It is also possible that the way the religious variables were measured made the adolescents care less than if they had been measured differently. For example, the questions for activities frequency and religious importance were family based (e.g., “Please indicate the frequency your family is involved in these activities,” “Please indicate how important

these activities are to your family's religious life"). Parents may associate the term "family" with more personal investment than adolescent children. Therefore, adolescents may feel these activities are important to their parents but not as much to them, which may explain the lack of relationship between the religious variables and their depressive symptoms scores. The religiosity questions may not be a true indication of the adolescents' personal religious beliefs or practices, and it is entirely possible that a measure asking about an adolescents' own individual practices (i.e., personal prayer, contemplation, or meditation) would yield different results. The secondary/control variable correlations indicate that income is important to religiosity and religious practices. As has been found in previous research (Wen, 2013), these correlations indicate that, for adolescents from lower-income families, the perception is that anything religious is happening at a greater frequency than for families with higher incomes.

Explaining the Regression

The results of the regression support past research findings, which have indicated certain demographic factors influence depressive symptoms (Rushton, Forcier, & Schectman, 2002; Wen, 2013). The results of model 3 are supported by previous research as well, which indicates that high perceived parent conflict also can predict high levels of depressive symptoms (Timmons & Margolin, 2014). Model 3 results also support previous research on family connectedness as a protective factor for adolescent depressive symptoms (Houltberg et al., 2011). The strength of the predictors in model three indicate that more research could yield important findings with regard to family climate and its influence on depressive symptoms. Model 2 results cannot support the hypothesis that family religious practices provide protection for adolescent depressive

symptoms. These results are not altogether surprising given the range of findings in the research on this topic. Despite the fact that some research has shown that religious attendance can protect adolescents from depressive symptoms (Barton et al., 2013; Rasic, Kisley, & Langille, 2011), other research has shown that other types of religious worship seem to be connected with higher rates of depressive symptoms (Bonner, Koven, & Patrick, 2003). Therefore, it is possible that the religious measures utilized in this research project fail to fully tease out which of the religious practices benefit the adolescents and which do not. For instance, perhaps praying as a family does not benefit and prevent individual depressive symptoms, but parents listening to personal prayers does have a protective effect. Additionally, it is also possible that the lack of personal control over religious worship complicated these results such that an adolescent who is frequently participating in family-level religious activities may not feel the freedom necessary to participate in private worship such as personal prayer, which may benefit them more than the family-level religious activities.

Explaining Findings with Resilience Theory

As was discussed previously in this document, resilience is defined as a human's ability to overcome negative circumstances and events through perseverance and a combination of protective factors that outweigh existing risk factors within the individual or the individual's circumstances (Fergus & Zimmerman, 2005; Fletcher & Sarkar, 2013). It is also pertinent to mention again that individual resilience is not defined only by positive outcomes but by a combination of risk factors, protective factors, and positive outcomes (Fergus & Zimmerman, 2005). Also note that true resilience is not achieved unless a positive outcome is achieved (Fergus & Zimmerman, 2005).

The protective factors that were anticipated in this research study were religiosity, frequency of family religious activities, and family religious activities importance. Secondary to these protective factors, family connectedness also was anticipated as a protective factor for adolescent depressive symptoms. While it was expected that all of these factors would combine to contribute to predicting lower depressive symptom scores in this sample, only family connectedness successfully predicted lower depressive symptoms. The risk factors examined in this research project were demographic factors including income, gender, age, and ethnicity, and parent conflict as perceived by the adolescent. Of these, only income and parent conflict successfully predicted higher depressive symptoms (i.e., lower income means higher depressive symptoms, and higher conflict means higher depressive symptoms).

Limitations

Several limitations should be discussed with regard to this research. First, as with all secondary data projects, this one is bound by the data as they were presented to the researcher. The measures used in gathering the data for this project are considered to be reliable and valid, but they are not the only type of measures available; it may be that different types of measures would yield different results than were discovered in this study. Additionally, all the measures were taken from the adolescent perspective and represent the adolescent child's point of view for each measure (except demographic measures). Therefore, it is possible that the makeup of the sample itself is what has led to the findings of the study. For example, it is possible that adolescents do not interpret the questions (e.g., "Please indicate the frequency your family is involved in these activities"; "Please indicate how important these activities are to your family's religious life") with

the same amount of personal investment as would their parents. Parents likely view these questions as more personally salient because their family may be viewed as an extension of themselves. However, if personal salience was the only factor to explain the lack of significance here, it would have been expected to see a significant relationship between the religiosity and depressive symptoms variables since religiosity was asked about the individual and not the family. Adolescents are also perhaps an unstable population with which to measure religion. This group has not yet fully matured and are still lacking with regard to their personal identity and beliefs. This alone may be the cause of the lack of significance of religious variables predicting their depressive symptom scores.

Demographic variables were not examined as potential moderating variables which may be a limitation to the findings, especially given that gender and income both correlated with depressive symptoms. Additionally, religious affiliation was not examined in this research, and the possibility that the types of religious affiliations may have an impact on both religious variables scores is worth examining in conjunction with depressive symptoms and family connectedness and parent conflict. Depression levels for this sample were high for this type of sample (Briere et al., 2013; Mason et al., 2009). It is possible that a sample with more moderate depressive symptom scores would yield different findings and show a stronger relationship between the religious variables and depressive symptoms. Because previous research has indicated that individuals with higher depressive symptoms may turn to religion to cope (Wen, 2013), it may be that for this sample the strength of their depressive symptom scores was simply too high for the religious practices to overcome. It also may be that while the family-based religious practices were thought to be enough to protect adolescents from depressive symptoms,

personal religious practices may in fact be a better protection for this group. As was suggested by other researchers (Hooper & Newman, 2011), this study used multiple measures of religiosity; however, still no significant relationship emerged between depressive symptom scores and religious variables for adolescents. As with other studies (Hooper & Newman, 2011), this study lacks religiosity data from both parents and the adolescent child. This weakness could account for the lack of significant findings.

Suggestions for Future Research

Adolescent depression might be associated with relationship problems later on in life (Sandberg-Thoma & Kamp Dush, 2014). This may especially be true given that high levels of adolescent depressive symptoms can lead to depression in adulthood (Pine et al., 1999; Reinherz et al., 2003). While no significant relationships emerged in this study between any religious variables and depressive symptoms, it is worth noting that findings in this study mirror what has already been done with regard to adolescent depression and family conflict and family connectedness (Houltberg et al., 2011).

One aspect of this study that warrants future research is the fact that gender was not used as a comparison variable. Given that this sample indicated gender was significantly related to depressive symptoms, it would be important for future projects to find out if perhaps gender moderates the relationships in the variables. Females tend to view religion as more important than do males (Milot & Ludden, 2009) so this relationship should be explored further. It is possible also that age could be a modifier of these results such that older adolescents would feel differently about their religiosity and their family's religious practices than do their younger counterparts. Future projects should attempt to compare results based on adolescent age. Perhaps the mean age of the

sample contributed to the lack of significant findings. It may be that older adolescents have the maturity necessary to understand how important religious practices are to their family and to themselves. It is also possible that older adolescents would have more stable depression scores, which may help stabilize future analyses.

Since this study did not use measures of religiosity from multiple perspectives, it is important that future researchers attempt to utilize multiple measures of religiosity from both parents and adolescent children. It is also suggested that, in addition to asking about family religiosity, other measures asking about the adolescents' personal worship patterns be used. Past research has indicated that adolescents benefit from personal religious worship (Davis & Epkins, 2009), perhaps because they have more predictor control over their own religious practices such as how and when they pray (Holder, Coleman, & Wallace, 2010). It may be important to examine this further in conjunction with family religious variables. It might be that both family religious practices and personal religious worship provide the necessary protection for adolescents that was not uncovered in this research project. Including both adolescents and parents in future research studies could help explain how religious behaviors are beneficial for each family member as well as the family unit. Perhaps using a family-level measure along with an individually measured score of depression did not allow for the true relationship to emerge. Therefore, it is suggested that future research examine family religious variables along with a family well-being measure to include cohesion and connectedness. This will allow for family-based variables to measure well-being for the family and not the individuals.

Conclusion

Since recent large-sample data have shown that people do turn to religion for support during stressful times (Newport, Witters, & Agrawal, 2012), it is surprising that this study found no relationship between depressive symptom scores and any of the religious measures. The lack of significant findings with religious variables combined with the mixed results of previous studies on this topic provides a basis for more research. Perhaps future research will discover that private religious practices will have more of an impact on adolescent depression symptoms than family-based practices. It is also possible that parents' depressive symptoms may be more impacted by family-based religious practices. The subject of religious practices and their potential benefits to depressive symptoms requires further exploration. As more research is done on this topic, significant findings may emerge and change the way people view family-based religious practices as these may benefit beyond what private practices alone could do.

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APPENDIX A
COMPLETE MEASURES AND REFERENCES

Complete Measures and References

Demographics (Control Variables)

Age

Age was calculated using an SPSS formula for age in years (2009 – birth year = age). When is your birthday? _____ / _____ / _____

Month Date Year

Gender

Gender (circle one): Male or Female

Ethnicity

Your Child's Ethnicity?

1 = European American, 2 = African American, 3 = Hispanic, 4 = Asian American, 5 = Other, 6 = Multi-Ethnic

Combined Income

Stem: What is your COMBINED (with your PARTNER) annual income?

Response Categories: 1 = Under \$20,000 per year, 2 = At least \$20,000 per year, 3 = At least \$30,000 per year, 4 = At least \$40,000 per year, 5 = At least \$50,000 per year, 6 = At least \$60,000 per year, 7 = At least \$70,000 per year, 8 = At least \$80,000 per year, 9 = At least \$90,000, 10 = At least \$100,000 per year, 11 = At least \$120,000 per year, 12 = \$150,000 or more per year

Religious Measures (Predictor Variables)

Religiosity

The influence that religion and spirituality have on the individual's life or identity was measured using items from the Santa Clara Strength of Religious Faith Questionnaire (Lewis, Shevlin, McGucklin, & Navrtil, 2001).

Historical Information

This measure addresses the influence that religion and spirituality have on the respondent's life and identity, including religious affiliation and frequency of worship behaviors. This scale originally included 10 items. For this survey it was reduced to 4 items, eliminating items 1, 3, 5, 7, 8, and 9 due to concerns about questionnaire length.

Scoring Information

No items are reverse scored. Higher scores indicate higher perceived religious influence on identity, meaning, life decisions, and religious behaviors. Mean scores for the current sample are reported in Table 2. Total scores for the original questionnaire range from 10 (low faith) to 40 (high faith).

Reference

Lewis, C. A., Shevlin, M., McGuckin, C., & Navrtil, M. (2001). The Santa Clara strength of religious faith questionnaire: Confirmatory factor analysis. *Pastoral Psychology, 49*, 379-384.

Questionnaire

Stem: How much do you agree with the following?

Response Categories (items 1-4): 1 (strongly disagree), 2 (disagree), 3 (agree), 4 (strongly agree)

1. I pray daily.
2. I look to my faith as providing meaning and purpose in my life.
3. My faith is an important part of who I am as a person.
4. My faith impacts many of my decisions.

Two open-ended questions

Stem: How often have you attended religious/spiritual services in the past 12 months?

Response Category: 0=Never, 1=A few times, 2= Several times, 3=Once a month, 4=Two or three times a month, 5=Once a week, 6 = More than once a week

“In an average week, about how many hours do you spend in religious/spiritual activities in your home (such as praying, meditating, or reading religious books)?”

Response Category: Open ended responses were given in hours.

Religious Practices

Family religious practices such as prayer, scripture study, and religious conversations are measured using FAITHS (Lambert & Dollahite, 2008). Both the frequency and the importance of religious activities are assessed, with responses for frequency ranging on a 7 point Likert-type scale from 0 (*never*) to 6 (*more than once a day*) and responses for importance ranging on a 5 point Likert-type scale from 0 (*not important*) to 4 (*extremely important*).

Historical Information

This study utilizes the authors' short version (9 items) of their original 18 item scale (Lambert & Dollahite, 2010).

Scoring Information

No items were reverse scored. In terms of frequency, the higher the score, the more frequently the family (from the perspective of the respondent) engages in religious activity. In terms of importance, the higher the score, the more importance the family places on religious activity (again, from the perspective of the respondent). Mean scores for this sample are shown in Table 2. Minimum and maximum scores in the current sample for frequency were 0 to 54 and 0 to 51 for importance.

Reference:

Lambert, N. M., & Dollahite, D. C. (2010) Development of the Faith Activities in the Home Scale (FAITHS). *Journal of Family Issues*.

Questionnaire:

Stem (Frequency): Please indicate the frequency your family is involved in these activities:

Response Categories (Frequency): 0=Never or Not Applicable, 1=Yearly/A Few Times a Year, 2=Monthly/A Few Times a Month, 3=About Weekly, 4=More than Once a Week, 5=About Daily, 6=More than Once a Day

Stem (Importance): Please indicate how important these activities are to your family's religious life:

Response Categories (Importance): 0=Not Important or Not Applicable,
1=Somewhat Important, 2=Important, 3=Very Important, 4=Extremely Important

1. Family prayer (family together other than at meals).
2. Family reading of scripture or other religious texts.
3. Family singing or playing religious music/instruments.
4. Family religious gatherings/activities/celebrations. (Family religious gatherings/activities/celebrations.)
5. Family use of religious media (e.g., videos, radio, TV).
6. Family religious conversations at home.
7. Saying/singing a blessing/grace/prayer at family meals.
8. Parents praying with child or listening to her/his prayers.
9. Couple prayer (husband and wife praying together).

Family Variables (Predictor Variables)

Connectedness

The degree to which the child feels socially connected to each parent was assessed using six items adapted from a general social connectedness measure (Lee, Draper & Lee, 2001). The original measure consists of 18 items from the Social Connectedness Scale-Revised, a measure of general social connectedness. This one has been reduced to 6 for the purpose of reducing questionnaire length.

Historical Information

This measure addresses the influence that religion and spirituality have on the respondent's life and identity, including religious affiliation and frequency of worship behaviors. This scale originally included 10 items. For this survey it was reduced to 4 items, eliminating items 1, 3, 5, 7, 8, and 9 due to concerns about questionnaire length.

Scoring Information

No items are reverse scored. Higher scores indicate a greater degree of parent-child social connectedness. The minimum score for the current sample was 7 and the maximum was 60. Mean scores for the current sample are displayed in Table 2.

Reference:

Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. *Journal of Counseling Psychology, 48*, 310-318.

Stem: How much do you agree with the following statement?

Response Categories: 1 (strongly disagree) to 5 (strongly agree)

1. Even though I am very close to my parent, I feel I can be myself.
2. I feel so comfortable with my parent that I can tell him/her anything.
3. My parent and I have some common interests and some differences.
4. I am comfortable with some degree of conflict with my parent.
5. Although I am like my parent in some ways, we are also different from each other in some ways.
6. While I like to get along with my parent, if I disagree with something he/she is doing, I usually feel free to say so.

Parent Conflict

The parent conflict scale measures the conflict between parents as perceived by the child. Cronbach's Alpha coefficient for this measure was previously was found to be .70 for parental conflict frequency subscale and .71 for the triangulation subscale (Grych, Seid, & Fincham, 1992).

Historical Information

The original measure consists of 51 items from the Children's Perception of Interparental Conflict Scale (Grych, Seid & Fincham, 1992), while this version was reduced to 10 items due to concern over the length of the survey questionnaire.

Scoring Information

After reverse coding question 7, higher scores on questions 1-5 indicate higher levels parental conflict (as perceived by the child) and higher scores on questions 6 -10 indicate higher levels of triangulation (as perceived by the child). Note: Initial reliability test indicated that the scale may be improved by removing item 7. The minimum score for the current sample was 2 and the maximum score for the current sample was 49. Mean scores for the current sample are displayed in Table 2.

Reference

Grych, J. H., Seid, M., & Fincham, F. D. (1992). Assessing marital conflict from the child's perspective: The children's perception of interparental conflict scale. *Child Development, 63*, 558-572.

Questionnaire

Stem: How often does this occur?

Response Categories: 1=Never, 2=Seldom, 3=Sometimes, 4=Often, 5=Always

1. I see my parents arguing or disagreeing.
2. They may not think I know it, but my parents disagree a lot.
3. My parents are mean to each other, even when I am around.
4. I see my parents arguing.
5. My parents nag and complain about each other.
6. I feel caught in the middle when my parents argue.
7. I do not feel like I have to take sides when my parents argue.

8. My mom wants me to be on her side when she and my dad argue.
9. I feel like I have to take sides when my parents argue.
10. My dad wants me to be on his side when he and my mom argue.

Criterion Variable

Adolescent Depression

Children's depression was assessed using the 20-item self-report CES-DC (Center for Epidemiological Studies Depression Scale for Children (Weissman, Orvaschel, & Padian, 1980)).

Scoring Information

Reverse code items 4, 12, and 16. Higher scores indicate more depressive tendencies. Weissman et al. (1980) have reported that scores of 15 or higher indicate significant depressive symptoms for adolescents and children. The minimum score for the current sample was 20 and the maximum was 71. Mean scores for the current sample are displayed in Table 2.

Reference

- Faulstich, M. E., Carey, M. P., & Ruggiero, L., et al., (1986). Assessment of depression in childhood and adolescence: An evaluation of the Center for Epidemiological Studies Depression Scale for Children (CES-DC). *American Journal of Psychiatry*, 143(8), 1024–1027.
- Weissman, M. M., Orvaschel, H., & Padian, N. (1980). Children's symptom and social functioning self-report scales: Comparison of mothers' and children's reports. *Journal of Nervous Mental Disorders*, 168(12), 736–740.

Questionnaire

Stem: During the Past Week...

Response Categories: 1 (Not at all), 2 (A little), 3 (Some), 4 (A lot)

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating, I wasn't very hungry.
3. I wasn't able to feel happy, even when my family or friends tried to help me feel better.
4. I felt like I was just as good as other kids.
5. I felt like I couldn't pay attention to what I was doing.
6. I felt down and unhappy.
7. I felt like I was too tired to do things.
8. I felt like something bad was going to happen.
9. I felt like things I did before didn't work out right.
10. I felt scared.
11. I didn't sleep as well as I usually sleep.
12. I was happy.
13. I was more quiet than usual.
14. I felt lonely, like I didn't have any friends.
15. I felt like kids I know were not friendly or that they didn't want to be with me.
16. I had a good time.
17. I felt like crying.
18. I felt sad.
19. I felt people didn't like me.
20. It was hard to get started doing things.

APPENDIX B

TABLES

Table 1 Correlations and Descriptive Statistics

Variables	1	2	3	4	5	6	7	8	9	10
1. Depression Symptoms (CES-D)	–									
2. Combined Household Income	-.130**	–								
3. Gender	.092*	-.029	–							
4. Ethnicity	.098*	-.085	-.036	–						
5. Age	.038	.005	-.099*	-.044	–					
6. Religiosity	.013	-.167**	.063	.023	-.064	–				
7. FAITHS frequency	.002	-.229***	-.048	.088	-.061	.677***	–			
8. FAITHS importance	.004	-.194***	-.035	.101*	-.089	.728***	.870***	–		
9. Parent conflict	.305***	-.237***	.034	.046	.106*	.048	-.052	-.010	–	
10. Family connectedness	-.291***	.210***	.082	-.049	-.058	.043	.009	.047	-.225***	–

* $p < .05$. ** $p < .01$. *** $p < .001$. ($N = 327$)

Table 1 Continued

Variables	1	2	3	4	5	6	7	8	9	10
<i>M</i>	31.92	8.22	1.52	1.72	13.83	9.17	12.81	10.46	18.27	45.23
<i>SD</i>	10.21	3.11	.50	1.56	1.04	4.13	13.21	10.32	6.99	8.62
Range	51	11	1	5	5	12	54	51	47	53
α	.84	-	-	-	-	.94	.93	.87	.86	.89

Note. gender: 1 = male, 2 = female. Age is in years from 12 - 17. Ethnicity: *European American* = 1, *African American* = 2, *Hispanic* = 3, *Asian American* = 4, *Other* = 5, *Multi-ethnic* = 6. Income: 1 = < \$20,000; 2 = \$20,000 – \$29,000; 3 = \$30,000 – 39,000; 4 = \$40,000 – 49,000; 5 = \$50,000 – 59,000; 6 = \$60,000 – 69,000; 7 = \$70,000 – 79,000; 8 = \$80,000 – 89,000; 9 = \$90,000 – 99,000; 10 = \$100,000 – 119,000; 11 = 120,000 – 149,000; 12 = > \$150,000

Table 2 Summary of Hierarchical Multiple Regression Analysis for Variables Predicting Adolescent Depressive Symptoms

	Model 1			Model 2			Model 3		
Predictor Variable	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Income	-.390	.180	-.119*	-.409	.186	-.125*	-.032	.182	-.010
Gender	1.982	1.124	.097	1.932	1.141	.095	2.239	1.071	.110
Ethnicity	.616	.360	.094	.629	.364	.096	.504	.341	.077*
Age in Years	.500	.539	.051	.485	.544	.050	.131	.512	.013
Religiosity				.024	.202	.010	-.044	.190	-.018
FAITHS Frequency				-.027	.088	-.035	.010	.083	.013
FAITHS Importance				.001	.120	.001	.014	.113	.014
Parent Conflict							.354	.080	.242**
Family Connectedness							-.283	.064	-.239**
R^2 Change	.036			.001			.126		
F for change in R^2	2.969*			.081			23.939**		

APPENDIX C
LETTERS OF APPROVAL

Email from FFP Indicating Approval for Project



Alice Long <aliceclong@gmail.com>

Proposal Draft for your Review

Jeremy Yorgason <jeremy_yorgason@byu.edu>
To: Alice Long <acl374@msstate.edu>

Wed, Dec 3, 2014 at 9:28 PM

Alice,

Your proposal has been approved! I'm surprised the decision was so quick, but your proposal must have been clear and easy to follow – good job!

It would help me in getting you the data set if you could pull a list of the variable names from the codebook that you plan to use. Is this something you could do and send me? I know the correct variables for a lot of the demographic variables, but getting the content specific variable names would be helpful (and would ensure I don't pull the wrong ones). Let me know if this is doable.

Thanks,

Jeremy

From: Alice Long [mailto:acl374@msstate.edu]
Sent: Tuesday, December 02, 2014 11:44 AM
To: Jeremy Yorgason

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[Quoted text hidden]

Email from IRB Indicating Exemption from Review



Alice Long <aliceclong@gmail.com>

Study 15-147: Familial religious practices, family religiosity, family connectedness, and depression symptoms

kmyhand@orc.msstate.edu <kmyhand@orc.msstate.edu>

Thu, Apr 16, 2015 at 12:26 PM

To: acl374@msstate.edu

Cc: kmyhand@orc.msstate.edu, jwilmoth@humansci.msstate.edu

Protocol Title: Familial religious practices, family religiosity, family connectedness, and depression symptoms

Protocol Number: 15-147

Principal Investigator: Ms. Alice Long

Date of Determination: 4/16/2015

Qualifying Exempt Category: 45 CFR 46.101(b)(4)

Dear Ms. Long:

The Human Research Protection Program has determined the above referenced project exempt from IRB review.

Please note the following:

- Retain a copy of this correspondence for your records.
- An approval stamp is required on all informed consents.
- Only the MSU staff and students named on the application are approved as MSU investigators and/or key personnel for this study.
- The approved study will expire on 12/31/2015, which was the completion date indicated on your application. If additional time is needed, submit a continuation request. (SOP 01-07 Continuing Review of Approved Applications)
- Any modifications to the project must be reviewed and approved by the HRPP prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project.
- Per university requirement, all research-related records (e.g. application materials, letters of support, signed consent forms, etc.) must be retained and available for audit for a period of at least 3 years after the research has ended.
- It is the responsibility of the investigator to promptly report events that may represent unanticipated problems involving risks to subjects or others.

This determination is issued under the Mississippi State University's OHRP Federalwide Assurance #FWA00000203. All forms and procedures can be found on the HRPP website: www.orc.msstate.edu.