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THE EFFECTS OF PERSONAL AND PARENTAL RELIGIOSITY ON
PSYCHOPATHOLOGY

By

Leah Ferrari Power

A Thesis
Submitted to the Faculty of
Mississippi State University
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THE EFFECTS OF PERSONAL AND PARENTAL RELIGIOSITY ON
PSYCHOPATHOLOGY

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Early viewpoints considered religion to be associated with negative mental health or unfit to being observed by scientific practice. However, more recent research has suggested that religion not only may play an important role in determining mental health, but that the particular details of religion and parental religion, such as intrinsic and extrinsic religiosity, strength of religious faith, and religious well-being, have not been examined thoroughly. The current study examined 486 undergraduate students and found that participant and perceived parental religiosity were correlated negatively with participants' internalizing and externalizing problems; extrinsic-social religiosity was correlated positively with participants' internalizing and externalizing problems; while extrinsic-personal religiosity had no correlation with participants' internalizing and externalizing problems. The findings also showed that participant and maternal religious well-being were significant predictors of internalizing problems, while participant and maternal religious well-being, paternal extrinsic-social religiosity, and participant extrinsic-personal religiosity were significant predictors of externalizing problems.

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CHAPTER I

INTRODUCTION

Throughout most cultures, religion and spirituality are some of the most important components of a person's life (Lukoff, Lu, & Turner, 1992). Religion may influence a person's behavior, cognition, and illness, yet mental health professionals tend to ignore or devalue this facet of the human experience (Lukoff et al., 1992). Although clinicians have fairly recently begun to focus on gender, ethnicity, and race in their practices and research, they have not been willing to address the religion aspect as readily (Lukoff et al., 1992). This disregard may be because mental health professionals are trying to establish psychology as a legitimate science, and therefore, do not want to delve into a seemingly "unscientific" aspect of human existence. Alternatively, it may be because the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text Revision (DSM-IV-TR*; American Psychiatric Association, 2000) rarely mentions religion, and when it does, it is usually infused with negative references. For example, the *DSM-IV-TR* has 12 references to religion in the Glossary, and all of the references depict psychopathology (Lukoff et al., 1992). Accordingly, if the diagnostic manual that psychologists utilize in their profession does not regard religion positively, then it is possible that the users of the manual may not either. Although the *DSM-IV-TR* proposes an addition to the future edition to include religion, the topic is still addressed in a negative manner. For example,

the *DSM-IV-TR* suggests a new category called “religious or spiritual problem,” which focuses on types of religious and spiritual dilemmas such as distressing experiences, questioning faith, conversion to a new faith, and questioning spiritual values (APA, 2000). Although the *DSM-IV-TR* is beginning to acknowledge religion and spirituality, it is focusing on its negative impact on mental health. Because of this disregard, there is a gap in psychology and religion between theory, research, and practice. The current study will examine how religiosity has an impact, either negative or positive, on a person’s psychopathology.

Religiosity has an impact on a person’s mental health, and specifically, a person’s psychopathology (Lukoff et al., 1992). However, it is important to premise that there are differences in types of religiousness and that these disparities may yield dissimilar influences on a person’s mental health. Specifically, individuals may experience their religion intrinsically or extrinsically (Allport & Ross, 1967). Individuals who are intrinsically religious live their daily lives the way that their religion dictates and have a more relationship-centered religion. In other words, religion is an end unto itself. These types of individuals do not live their religious lives to please others or gain status, but instead do it for themselves and to fulfill their relationship with their higher power. An example of someone who is intrinsically motivated for religion is one whose whole approach to life is based off his/her religion (Gorsuch & McPherson, 1989). Conversely, individuals who are extrinsically religious use religion as a tool to gain personal profit and popularity. In other words, religion is a means to some external end. One type of extrinsically motivated religion is for personal gain, where the person uses religion as a source of comfort. An example of someone who is extrinsic-personally motivated for

religion is one who prays mainly for his/her own relief and protection (Gorsuch & McPherson, 1989). The other type of extrinsically motivated religion is social, where the person uses religion as a social gain (Kirkpatrick & Hood, 1990). An example of someone who is extrinsic-socially motivated for religion is one who attends church because it helps him/her make friends (Gorsuch & McPherson, 1989).

Religion and Psychopathology

Although much of the research on religiosity and psychopathology does not make a distinction between intrinsic and extrinsic orientations to religion—many researchers have performed studies on mainstream religiousness with regard to psychopathology. Historically, some of the most famous psychologists, such as Ellis and Freud, believe that religiosity has a strong negative impact on mental well-being and rational thinking (Bergin, 1983). Many influential psychologists believed that psychology, as a science, needs a strong empirical basis without any subjectivity. For them, religion has no empirical backing, and therefore should not be studied, adding that religion is maladaptive to the individual (Bergin, 1983). Because of these psychologists' conclusions, many clinical professionals have continued to follow in the thought processes of these forerunners of psychology. They have assumed that religiosity and psychology should not mix in research and therapy, and that religiosity is maladaptive to the client (Bergin, 1983). However, much of the research performed in this area has shown data contrary to this thought process.

According to Bergin's (1983) meta-analysis of 24 studies from 1951 to 1979, religiousness and psychopathology are not correlated positively, contrary to preconceived

notions. All the studies that Bergin examined had at least one religiosity measure and one pathology measure. Of those 24 pertinent studies, the data revealed 30 effects (such as paranoia and anxiety) of religious involvement on mental health. Of those 30 effects, 23% showed a negative relationship (i.e., higher religious involvement associated with lower mental health), 47% showed a positive relationship (i.e., higher religious involvement associated with higher mental health), and 30% showed a neutral (zero) relationship. In other words, 77% of the measures showed either a positive or neutral relationship between religious involvement and mental health, rather than a negative relationship. Of the seven significant effects, five showed a positive relationship and two showed a negative relationship. Although the studies do not strongly support a positive relationship between religious involvement and mental health, more importantly they also do not provide strong support for a negative relationship like many psychologists from the past believed. These data are important in that they contrast many of the popular beliefs that many psychologists have held.

Although Bergin found inconsistent results for positive correlations between religious involvement and mental health, Larson et al. (1992) uncovered more consistent findings. Larson et al. examined articles from the *American Journal of Psychiatry* and the *Archives of General Psychiatry* that addressed religion. The researchers performed a meta-analysis for the articles on the dimensions of religious commitment and mental health. The dimensions of religious commitment that the researchers found were ceremonial participation, personal purpose, beliefs, values, social support, prayer, relationship with God, and other. They found that two thirds of studies in those journals, written between 1978 and 1989, did not make a hypothesis or reported no results about

the relationship between religious commitment and mental health status. For the studies that included a measure of religious commitment and mental health status, at least half of the studies reported a positive relationship between religious commitment and mental health. Although a positive correlation of religious commitment and mental health status was found, the researchers did not categorize the dimensions of religious commitment into the participants' motivation behind their commitment (e.g., intrinsic versus extrinsic religiosity). Regardless, it is important to note that the majority of studies during that time that included measures of religiosity and mental health, found positive correlations (i.e., higher religiosity associated with higher mental health) between the two measures.

White, Joseph, and Neil (1995) examined the association of religiosity, psychoticism, and schizotypal traits by administering the Francis Scale of Attitudes towards Christianity (FSAC), Eysenck's Personality Questionnaire (EPQ), Eckblad and Chapman's Magical Ideation Scale (MgI), and Claridge's Schizotypal Traits Questionnaire (STQ) to 183 adult participants. Results of the study revealed a negative correlation between religiosity and psychoticism on the EPQ because they loaded strongly on the same factor. Psychoticism on the EPQ mainly measures asociality, so it comes to no surprise that people who are more religious are more social, especially because they may attend social events (e.g., group worship). Contrarily, the researchers found a weak positive correlation between religiosity and certain schizotypal traits (e.g., aberrant perceptions and beliefs) because they loaded modestly onto the same factor. Schizotypal traits are independent from the EPQ's measure of psychoticism. Additionally, the researchers found a significant relationship ($r = .19$) between religiosity and unusual perceptual experiences in men only. Although these results suggest an

association between delusional ideation and religiosity, the researchers admit that more research needs to be completed to study specifically what types of religion and delusions participants may experience.

Pfeifer and Waelty (1999) examined the relationship between a more specific form of religiosity (Christian religiosity) and mental health (neuroticism). The researchers studied 44 outpatients with depression, anxiety, or personality disorders and 45 control participants without any disorders. The researchers used a religious orientation scale to assess the participants' level of religiosity and labeled them as having either low religiosity or high religiosity. To measure neuroticism, the researchers used the Eysenck Personality Scale (EPIN). The researchers found no correlation in either the testing group or the control group between neuroticism and religiosity. However, the two groups viewed religion differently in regards to neuroticism and mental health. For example, more participants in the control group thought that religion can make a person sick than participants in the treatment group, who saw the supportive and healing aspect of religion. From these data, the researchers concluded that the principal factor of neurotic functioning in religious patients is their underlying psychopathology as opposed to their personal religious commitment. However, it is possible that the researchers found no correlation because the specific measures that they examined (Christian religiosity and neuroticism) yielded different results than broad measures of religiosity and mental health or psychopathology. Another explanation is low power of the experiment: with only 45 people in each group, the researchers might not have had enough variability on their religiosity measure.

Huguelet, Borrás, Gillieron, Brant, & Mohr (2009) examined religious commitment. They interviewed 115 stable outpatients who had been diagnosed with Schizophrenia or Schizoaffective Disorder. The interviews assessed substance use, substance abuse, religiosity, and spirituality. The researchers categorized the patients' substance abuse and use by "none," "in the past," and "current." They also categorized the role of religion and spirituality in the patients' lives as "absent or marginal," "important without religious community," and "important with religious community." The researchers found that religious involvement is negatively correlated with substance abuse and use in the Schizophrenia and Schizoaffective patients. In addition, the researchers found that religion may play a role in recovery of Schizophrenia patients with substance abuse. Hence, participants with mental disorders benefitted from religious commitment when dealing with their mental disorder. However, the researchers used clinical interviews and medical records to collect their data and did not use a standardized measure to assess the patients. Thus, the data may not be reliable and should be recollected with more valid measures.

Schapp-Jonker, Eurelings-Bontekoe, Verhagen, and Zock (2002) studied the relationship between personality pathology and a person's image of God. The researchers defined God image as "an individual's affective experience of God or the internal, mental representation of God... [which] refers to emotional experiences in general, not specifically to visual experiences" (Schapp-Jonker et al., 2002, p. 1). The researchers interviewed 46 clinical, Christian patients to assess their personality disorder diagnosis (according to the *DSM-IV* and the *ICD-10*) and their God image (according to a questionnaire focused on feelings of God and experience of God's actions). The

researchers found that the more personality pathology is present in participants, the more negative God image participants held ($r = 0.53$). In particular, borderline ($r = 0.49$), avoidant ($r = 0.46$), schizotypal ($r = 0.42$), schizoid ($r = 0.40$), dependent ($r = 0.39$), and paranoid ($r = 0.35$) personality disorders were negatively correlated with a negative image of God. Interestingly, the patients scoring high on cluster-A traits (schizoid, schizotypal, and avoidant PD) viewed God as aloof, distant, and unsupportive, which is similar to how people with these disorders view other people. Also, patients scoring high on cluster-C traits (especially obsessive-compulsive traits) viewed God as dominant and punishing, which is similar to how people with these disorders relate interpersonally. This study suggests that personality factors and psychopathology may relate to religiosity, and it also aims to investigate the effects of religiosity on psychopathology.

As previously stated, it is important to note that there is a difference between intrinsic and extrinsic religiosity (Maltby & Day, 2002). Lindenthal, Myers, Pepper, and Stern (1970) were the first to make a distinction between internal and external social aspects of religious behavior. Lindenthal et al. performed a longitudinal study on 938 adults examining their health statuses and changes in religious activity during life crises. A major life crisis could be any event ranging from a role transformation (e.g., becoming a mother), change in environment (e.g., a move to another home), and/or the imposition of pain (e.g., a death in the family). To study the participants' health status, the researchers assessed the presence or absence of psychopathology with an extensive clinical examination. To study the participants' internal aspects of religious behavior, the researchers examined their prayer life before and after the major life crisis. The participants' internal aspects of religious behavior may be similar to a participants'

intrinsic religiosity. To study the participants' external or social aspects of religious behavior, the researchers measured their institutional religious behavior, or organized religious activity, before and after the major life crisis. The participants' external aspects of religion may be similar to a participants' extrinsic religiosity, although a participant could be involved with organized religion without being extrinsically motivated.

In their study, Lindenthal et al. found a negative correlation for psychological impairment and participation in organized religious activity. They concluded that the greater the psychological impairment, the more likely the person was to isolate himself or herself from organized social activities in general. During a major life crisis, the researchers found that the individuals with psychological impairment participated in organized religious activities even less frequently than before the crisis. Also during a major life crisis, the researchers noted that the greater the impairment during a major life crisis, the more likely the individual was to pray. However, mental health status did not play a significant role in the likelihood of the participants' praying.

Maltby and Day (2002) included 308 adults in their study and measured the participants' intrinsic and extrinsic orientation to religiosity in relation to schizotypal and borderline personality disorder tendencies. The researchers used Claridge's STQ to measure schizotypal and borderline personality tendencies, and the 'Age-Universal' I-E Scale to measure religious orientation (intrinsic and extrinsic religiosity). To measure religious experience, the researchers asked the participants to think of a time when they religiously worshiped (e.g., prayer, reading the bible, attending a place of worship) and then rate how often they felt peace, joy, unity, warmth, desolation, aloneness, etc.

The results of Maltby and Day's research showed significant relationships between schizotypal personality traits and religious experience. Overall, when there was an association between schizotypal personality tendencies and religious orientation, intrinsic religiosity positively correlated with psychological well-being while extrinsic religiosity negatively correlated with psychological well-being. However, there was a mild positive correlation for males between intrinsic religiosity and the schizotypal measures of Magical Ideation and Unusual Perceptual Experiences scales. In general, an intrinsic orientation to religion had a negative correlation with schizotypal tendencies, and both an extrinsic orientation to religion and religious experience had positive correlations with Schizotypal tendencies. Hence, the higher the participant's intrinsic religiosity, the lower the participant's specific psychopathology, and the higher the participant's extrinsic religiosity, the higher the participant's specific psychopathology. Additionally, male and female intrinsic religiosity scores negatively correlated with borderline personality disorder scores.

Hackney and Sanders (2003) performed a meta-analysis on religiosity and psychological adjustment. The researchers examined 34 studies between 1990 and 2001 to see if researchers' conceptualization of religion changed the relationship between religiosity and psychological adjustment. In their review, the researchers used three categories of religiosity: institutional religion, which includes social religiousness and is associated with extrinsic religiosity; personal devotion, which includes internal, personal religiousness and is associated with intrinsic religiosity; and ideological religion, which includes beliefs involved with religious activity and is associated with attitudes and

fundamentalism. In general, Hackney and Sanders found a positive correlation between religiosity and mental health ($r = .10$).

Tix and Frazier (1998) surveyed 268 university students in their study to examine the intrinsic religiousness and mental health. The researchers measured intrinsic religiosity by using the intrinsic scale from the Religious Orientation Scale-Revised (ROS-R; Gorsuch & McPherson, 1989), the degree of sanctification by striving (a measure of the participants' personal goals and how much they attribute that to religious or spiritual reasons), and mental health by using the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983). The researchers found that intrinsic religiousness was correlated negatively with hostility, even though this result was mediated by the degree of sanctification within individuals' strivings. They also found that intrinsic religiosity correlated negatively with anxiety and depression, but this was moderated by religious tradition. The current study will examine if other factors, such as parental religiosity, have moderating or mediating effects on religiosity and psychopathology.

When examining religion broadly, research shows inconsistent results when correlating with psychopathology or mental health (Bergin, 1983; Pfeifer & Waelty, 1999; White et al., 1995). Many of these inconsistent results may be due to the different relationships among different aspects of religion. Therefore, to separate different aspects of religion, researchers began to examine intrinsic and extrinsic religiosity (Allport & Ross, 1967). In general, many of these researchers have found that intrinsic religiosity is correlated negatively with psychopathology (Hackney & Sanders, 2003; Leach, Berman, & Eubanks 2008) and extrinsic religiosity is correlated positively with psychopathology (Maltby & Day, 2002; Salsman & Carlson, 2005; Tix & Frazier, 1998), which refutes

traditional notions that all religion is maladaptive for mental health (Bergin, 1983). A possible rationale is that intrinsically motivated individuals are genuine in their religious pursuits and feel supported by their religious beliefs, thus reducing mental health problems. Contrarily, individuals who are motivated extrinsically toward religion experience increased mental health problems related to self-centeredness and guilt.

Parental Religiosity

In addition to studying the participant's personal intrinsic and extrinsic religiosity, another interesting facet of a person's religiosity is his or her parents' religiosity. The participant's parents' religiosity can influence the parents' styles of parenting (Abar, Carter, & Winsler, 2009; Duriez, Soenens, Neyrinck, & Vansteenkiste, 2009; Mahoney, Pargament, Tarakeshwar, & Swank, 2008; Snider, Clements, & Vazsonyi, 2004), the child's behavior (Mahoney et al., 2008; Abar et al., 2009), and the parent-child relationship (Pearce & Axinn, 1998; King, 2003).

Mahoney et al. (2008) performed a meta-analysis of 94 articles on religion and marital or parenting functioning published from 1980 to 2008. In the parenting sphere, the researchers examined general childrearing attitudes, beliefs about corporal punishment, actual employment of corporal punishment, nurturing parenting tactics, and childhood psychopathology. Overall, the researchers found a general lack of data in relation to parenting and religiosity. Mahoney et al. studied 14 articles about religious parent-child disciplinary attitudes and behaviors to gain the child's compliance. Studies often found a correlation between the parents' beliefs in the importance of childhood obedience by use of physical discipline with the parents' actual use of punitive practices.

In general, conservative parents find it more acceptable and effective to use corporal punishment, such as spanking, on their children. On the other hand, conservative parents' actual use of corporal punishment on their children is much less than their attitudes on corporal punishment. Mahoney et al. examined eight studies on the relationship between parental religiousness and the child's mental health outcome. They found that greater parental religiousness resulted with fewer behavioral problems, more pro-social behaviors, less frequent alcohol and marijuana use, and less antisocial behavior.

Pearce and Axinn (1998) studied the impact of family religious life on the quality of the mother's and child's relationship. The researchers focused on the affective relationship between the mother and child, namely the determinants of affection, sentiment, enjoyment, and understanding. The researchers selected 867 mother-daughter participants in a 24-year longitudinal study consisting of seven interviews with the mother and two with the child. To measure the quality of the mother-child relationship, the researchers used parent-child affection measures for both the mother and the child. The researchers measured religiousness by the mothers' religious affiliation, religious services attendance, and personal importance of religion. Pearce and Axinn found that religiosity plays a significant positive effect on mother-child relationships, as reported by both the mother and child. Religious activities also improve mother-child relationships, and as a mother increases her religious activities, her view of the quality of the mother-child relationship increases. However, the emphasis she places on the importance of religion greatly influences this view. Also, the more closely the mother and child's

personal importance of religion are to each other, the higher they rate the quality of their relationship.

King (2003) examined the influence of religion on fathers' relationships with their children. Studying father-child relationships is increasingly prevalent in society because of the rise of mothers working outside of the home. To study this, King (2003) used data from the 1999 National Survey of Midlife Development in the United States. The survey consisted of a phone interview and a mail-in questionnaire, and the researcher examined the data on married or divorced men with at least one biological child. The survey focused on the fathers' perspective of his overall relationship with the child, expectant relationship in 10 years, effort he invests in the relationship, obligation he has to be in contact, and perspective on how his relationship compares to other father-child relationships. The survey also included items on how much emotional, physical, and financial support the father gives to his child. The survey asked about the fathers' religiousness by inquiring how religious the father was, how important religion was to the father, how often the father sought religious means when he had problems, how many services he attended, his involvement in religious groups, and how important it was for his child to be involved in religious services. King found that religious fathers—both married and divorced—were more involved with their children. Surprisingly, King (2003) found a greater egalitarian viewpoint for religious fathers, which is contrary to the more rigid, traditional household view.

Snider et al. (2004) investigated the relationship between late adolescents' perceptions of parental religiosity and of parenting. Two hundred and ninety late adolescents (mean age 20.3) reported their interactions with and understandings of their

parents when they were living with them. The questionnaire assessed parenting behaviors (closeness, support, monitoring, communication, conflict, and approval), parenting style (acceptance/involvement and strictness/supervision), and parent religiosity (parents' church attendance, church status, church involvement, frequency of reading books of religious faith, and prayer). Snider et al. found that the more the adolescents perceived their parents to be religious, the more they thought their parents' parenting was effective.

Duriez et al. (2009) examined if parental religiosity is correlated with parenting. They sampled 482 mother-adolescent child dyads and 453 father-adolescent child dyads. Parents completed a religiosity measure, and both parents and adolescents completed parenting styles and parental goals questionnaires. In their results, the researchers noted that it is important to examine various aspects of parents' religiosity. In particular, the researchers noted inconsistent findings when examining global religiosity and parenting. For example, religious parents were more likely to promote conservation of goals as opposed to openness to change goals. However, parental conservation of goals could lead to two contrasting results: that children would be less likely to participate in problem behaviors or that children would be raised by rigid, closed-minded parents. Although the researchers found mixed results when examining parenting and religiosity, they found a consistent finding that a higher symbolic religious cognitive style has been associated consistently with adaptive parenting.

Abar et al. (2009) examined the relationship between perceived parental and personal religiosity, perceived maternal parenting style, student academic self-regulation and achievement, and risky behavior. This study is similar to the current study, which

also measures the child and perceived parental religiosity. However, the current study will compare religiosity to internalizing and externalizing problems instead of measuring student academic ability and risky behavior. The participants' religiosity was measured using the ROS-R, which includes intrinsic and extrinsic religiosity subscales (Gorsuch & McPherson, 1989). The parents' religiosity measure was scored by multiplying the participants' answers to if they thought their parents were religious (1 = not religious, 2 = somewhat religious, 3 = deeply religious) and how often their parents attended church (1 = never, 2 = less than once a month, 3 = once a month, 4 = two to three times a month, 5 = about once a week, 6 = several times week). The perceived maternal parenting style was measured by the Parental Authority Questionnaire (PAQ; Buri, 1991).

The researchers examined 85 participants from a small, private Seventh-Day Adventist college in the South. Ninety-three percent of the participants were African American. Abar et al. asked the participants to come to two, 1-hour small group meetings where they administered the measures to the participants. First, the researchers looked at the relationship between maternal parenting, student academic self-regulation and achievement, and risky behavior. Abar et al. found that maternal authoritative parenting was associated with better academic achievement, whereas maternal authoritarian parenting was associated with poorer academic achievement. Next, the researchers looked at the relationship between religiosity, student academic achievement and self-regulation, and risky behavior. Abar et al. found that students with high intrinsic religiosity had better academic achievement. However, the researchers did not find an association between maternal parenting style and parental religiosity. This study focused

on a homogenous group of African American, Seventh-Day Adventist students. The current study will expand this population by sampling from a large university.

Overall, prior research has demonstrated that an individual's parental religiosity may impact parenting style (Abar et al., 2009; Duriez et al., 2009; Mahoney et al., 2008; Snider et al., 2004). Parental religiosity also can impact the child's behavior (Mahoney et al., 2008; Abar et al., 2009) and the relationship between the parent and child (Pearce & Axinn, 1998; King, 2003).

Current Study

The extant research concerning religiosity and psychopathology is limited in general and has major inadequacies. Previous studies have looked at various populations, including very specific populations, whereas the current study will examine a heterogeneous population of late adolescent college students from a large university. Examining this population is necessary to investigate how religiosity and psychopathology relate in college students in general as opposed to more specific populations.

The extant research does not measure the multitude of disorders found in the *DSM-IV-TR* (Pfeifer & Waelty, 1999). For example, the studies described above assessed personality disorders and psychotic features. In addition to these disorders, researchers also need to examine relationships between religiosity and other forms of psychopathology, particularly more common psychopathology. The current study will address this point by measuring a broad range of psychopathology using the Adult Self-Report (Rescorla & Achenbach, 2004), which measures mood, anxiety, thought,

aggression, antisocial tendencies, and somatic problems. These problems are more prevalent than other disorders, such as personality disorders (Schapp-Jonker et al., 2002), Schizophrenia or Schizoaffective Disorder (Huguelet et al., 2009), neuroticism (Pfeifer & Waelty, 1999), or psychoticism (White, Joseph, & Neil, 1995)

Additionally, many of the studies did not categorize religiosity thoroughly. Many of these studies measured the participants' religiosity on a single scale or measured the participants' religious affiliation, but those researchers failed to measure the motivation for their religiosity. Furthermore, these studies have failed to conduct a comparison of intrinsic versus extrinsic-social and extrinsic-personal religiosity to improve measuring religiosity. Similar to Gorsuch and McPherson (1989), the current study will address this issue by measuring the participants' intrinsic, extrinsic-social, and extrinsic-personal motivations for religion.

Hypothesis 1a states that intrinsic religiosity will have a negative correlation with psychopathology (i.e., higher intrinsic religiosity associated with lower psychopathology), and hypothesis 1b states that extrinsic-social and extrinsic-personal religiosity will have a positive correlation with psychopathology (i.e., higher extrinsic religiosity associated with higher psychopathology). This hypothesis is based on Maltby and Day's (2002) research on intrinsic and extrinsic religiosity, and Lindenthal et al.'s (1970) research on internal and external social aspects of religious behavior. Hypothesis 2a states that parents' perceived intrinsic religiosity will be correlated positively with participants' intrinsic religiosity and correlated negatively with participants' psychopathology. Hypothesis 2b states that parents' perceived extrinsic religiosity will be correlated positively with participants' extrinsic religiosity and correlated positively

with participants' psychopathology. This hypothesis is based on Mahoney et al.'s (2008) meta-analysis of articles on religion and childhood psychopathology, and Abar et al.'s (2009) research on the relationship between the parent and child's religiosity and student academic self-regulation, achievement, and risky behavior.

Hypothesis 3 states that perceived parental religiosity and participants' religiosity will predict a significant amount of variance in participants' psychopathology when analyzed simultaneously in a regression. Specifically, participants' intrinsic and extrinsic religiosity, strength of religious faith, and beliefs in a concerned and caring God will be used to predict participants' psychopathology first. Next, parents' intrinsic and extrinsic religiosity, strength of religious faith, and beliefs in a concerned and caring God will be added to participant variables to predict participants' psychopathology beyond participants' religious variables alone.

CHAPTER II

METHOD

Participants

College students ($N = 486$) enrolled at Mississippi State University participated in the study. Five hundred students participated in the study, but 14 participants were removed because they were younger than 18 or older than 25 years of age so that the sample consisted only of late adolescent participants, an age range also described as emerging adulthood. Participants were recruited through the Psychology Research Program (PRP; Sona Systems) and earned research credit in exchange for their participation in the study.

The sample ranged in age from 18 to 25 years ($M = 18.81$, $SD = 1.213$) and 65.8% were females and 34.2% were males. The majority of participants (70.9%) were freshmen, whereas 17.9% were sophomores, 5.8% juniors, and 5.2% seniors. Participants identified their race as Caucasian (81%), African-American (15.5%), Latino (1.4%), Asian (0.6%), or other (1.4%). Only Caucasian and African-American participants ($N = 468$) were included in analyses given the low number of other races in the study. The majority of participants (92.4%) reported being Christian, whereas the minority were other (3.1%), atheist/agnostic (2.9%), Jewish (0.4%), and Mormon (0.2%).

Materials

Demographic Questionnaire. The participants completed a demographics questionnaire (see Appendix A). Information obtained included age, race, gender, and education level.

Adult Self-Report. The Adult Self-Report (ASR; Rescorla & Achenbach, 2004) consists of 123 statements used to assess internalizing and externalizing psychopathology over the past 6 months (see Appendix B). Problem behaviors are scored with 0 = *not true*, 1 = *somewhat or sometimes true*, and 2 = *very true or often true*. The 123 problem behaviors constitute 8 empirically-based syndromes derived by factor analysis. Loading on the Internalizing Problems scale are the Withdrawn, Somatic Complaints, and Anxious/ Depressed Syndrome scales. Loading on the Externalizing Problems scale are the Rule-Breaking Behavior, Aggressive Behavior, and Intrusive Syndrome scales. Other Syndrome scales include Thought Problems and Attention Problems that do not load onto a higher-order scale. A Total Problem score can be calculated by summing the individual item scores. For this questionnaire, internal consistency (alpha) ranged from .87 to .93 (Rescorla & Achenbach, 2004). The ASR was used to indicate internalizing and externalizing problems in this study.

Religious Orientation Scale-Revised. The Religious Orientation Scale-Revised (ROS-R; Gorsuch & McPherson, 1989) is a 14-item self-report scale designed to measure intrinsic and extrinsic religious orientations (see Appendix C). The ROS-R is a revised version of the Religious Orientation Scale (ROS; Allport & Ross, 1967). Each item is

scored on a 5-point Likert scale from *strongly disagree* to *strongly agree*. Eight of the items measure intrinsic religiosity (alpha = .83) and 6 of the items measure extrinsic religiosity. The extrinsic index has two subscales: Extrinsic-social (3 items, e.g., “I go to church mainly because I enjoy seeing people I know there”) (alpha = .58) and extrinsic-personal (3 items, e.g., “What religion offers me most is comfort in times of trouble and sorrow”) (alpha = .57). The participants answered each statement in the ROS-R for themselves and how they think their mother and father would respond.

Santa Clara Strength of Religious Faith Questionnaire. The Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante & Boccaccini, 1997) is a 10-item questionnaire which measures a participant’s strength of religious faith (see Appendix D). The SCSORF is scored on a 4-point scale and is designed to measure the participant’s religious faith regardless of denomination or affiliation. This test also is correlated with intrinsic and extrinsic religiosity, indicating convergent validity (Hall, Meador & Koenig, 2008). The SCSORF has high internal reliability (Cronbach alpha = .94 for a university student sample, .97 for a civic group sample, and .96 for a high school sample). Similar to the ROS-R, the participants will answer each statement in the SCSORF for themselves and how they think their mother and father would respond.

Religious Well-Being Subscale. The Religious Well-Being Subscale (RWB; Paloutzian & Ellison, 1982) is a 10-item subscale of the Spiritual Well-Being Scale (see Appendix E). The RWB measures the participants’ beliefs in a concerned and caring God, e.g., “I believe that God is concerned about my problems.” Items are ranked on a 6-point scale from “strongly disagree” to “strongly agree.” The RWB’s has an overall

internal consistency (alpha) of .94 (inpatients, alpha = .92; outpatients, alpha = .94) (Paloutzian & Kirkpatrick, 1995). The RWB has a positive correlation with intrinsic religious orientation, $r = .79$ (Ellison, 1983). Similar to the ROS-R and the SCSORF, the participants answered each statement in the RWB for themselves and how they think their mother and father would respond.

Procedure

Participants learned about the study through Mississippi State University's online Participant Research Pool (PRP) website. Potential participants were able to read a description about the study and approximate completion time to see if they would be interested in participating. If they decided to participate, the participants received a complete written explanation of the testing procedures as part of the informed consent (see Appendix F). The participants who agreed to the consent form completed the questionnaires described above on the PRP website. All participants completed the demographics questionnaire first and then completed the other measures in a randomized order. Participants completed the demographics questionnaire and the ASR for themselves. Participants completed each item on the ROS-R, the SCSORF, and the RWB for themselves and their perceptions of their mother and father. Hence, participants completed question 1 on the ROS-R for themselves, mother, and then father, and then proceeded to question 2. After the participants completed the entire questionnaire, they received a debriefing form (Appendix G). On this form, they learned about the purpose of the study and information about psychological services at Mississippi State University.

CHAPTER III

RESULTS

Data were analyzed using PASW 18.0. Unless otherwise specified, an alpha level of .05 was used. Means and standard deviations of scales from the questionnaires are found in Table 1.

Table 1

Means and Standard Deviations of Scales

	<i>M</i>	<i>SD</i>
ROS-R Intrinsic (Self)	30.39	6.53
ROS-R Intrinsic (Mother)	31.41	6.22
ROS-R Intrinsic (Father)	30.23	6.67
ROS-R Extrinsic Social (Self)	6.84	2.47
ROS-R Extrinsic Social (Mother)	6.62	2.42
ROS-R Extrinsic Social (Father)	6.56	2.40
ROS-R Extrinsic Personal (Self)	10.94	2.53
ROS-R Extrinsic Personal (Mother)	11.02	2.39
ROS-R Extrinsic Personal (Father)	10.59	2.59
SCSORF (Self)	32.56	6.98
SCSORF (Mother)	33.89	6.49
SCSORF (Father)	32.11	7.58
RWB (Self)	50.93	10.61
RWB (Mother)	52.40	9.45
RWB (Father)	50.72	10.97
ASR Internalizing	15.36	11.85
ASR Externalizing	12.21	9.85

Hypotheses 1 and 2 were tested with Pearson correlations. Hypothesis 1a—that intrinsic religiosity will have a negative correlation with psychopathology—was supported. Results indicated that intrinsic religiosity was correlated negatively with internalizing problems, $r(443) = -.155, p = .001$, and externalizing problems, $r(442) = -.241, p < .0005$.

Hypothesis 1b—that extrinsic-social and extrinsic-personal religiosity will have a positive correlation with psychopathology—was supported partially. Supporting hypothesis 1b, results indicated that extrinsic-social religiosity was correlated positively with internalizing problems, $r(452) = .174, p < .0005$, and externalizing problems, $r(451) = .193, p < .0005$. However, failing to support hypothesis 1b, extrinsic-personal religiosity was not correlated significantly with internalizing, $r(453) = .019, p = .686$, or externalizing problems, $r(452) = -.039, p = .409$.

Hypothesis 2a—that parents' perceived intrinsic religiosity will be correlated positively with participants' intrinsic religiosity and correlated negatively with participants' psychopathology—was supported. Participants' intrinsic religiosity was correlated positively with perceived maternal intrinsic religiosity, $r(442) = .675, p < .0005$, and perceived paternal intrinsic religiosity, $r(426) = .663, p < .0005$. Also, mothers' perceived intrinsic religiosity was correlated negatively with participants' internalizing problems, $r(444) = -.148, p = .002$, and externalizing problems, $r(443) = -.215, p < .0005$. Similarly, fathers' perceived intrinsic religiosity was correlated negatively with participants' internalizing problems, $r(427) = -.111, p = .022$, and externalizing problems, $r(427) = -.160, p = .001$.

Hypothesis 2b—that parents' perceived extrinsic religiosity will be correlated positively with participants' extrinsic religiosity and correlated positively with participants' psychopathology—was supported partially. Supporting hypothesis 2b, participants' extrinsic-social religiosity was correlated positively with perceived maternal extrinsic-social religiosity, $r(457) = .686, p < .0005$, and perceived paternal extrinsic-social religiosity, $r(441) = .625, p < .0005$. Participants' extrinsic-personal religiosity was correlated positively with perceived maternal extrinsic-personal religiosity $r(451) = .748, p < .0005$, and perceived paternal extrinsic-personal religiosity, $r(438) = .681, p < .0005$. Additionally, mothers' perceived extrinsic-social religiosity was correlated positively with participants' internalizing problems, $r(452) = .154, p = .001$, and externalizing problems, $r(450) = .147, p = .002$. Similarly to perceived maternal religiosity, perceived paternal extrinsic-social religiosity was correlated positively with participants' internalizing problems, $r(434) = .196, p < .0005$, and externalizing problems, $r(433) = .257, p < .0005$. Failing to support hypothesis 2b, perceived maternal and paternal extrinsic-personal religiosity was not correlated significantly with participants' internalizing, $r(450) = -.001, p = .981$ and , $r(436) = .029, p = .546$, respectively, and externalizing problems, $r(448) = -.069, p = .144$ and , $r(435) = -.014, p = .773$, respectively,.

To test hypothesis 3—that perceived parental religiosity and participants' religiosity will predict a significant amount of variance in participants' psychopathology—a hierarchal regression was used to predict internalizing problems, and a separate hierarchal regression was used to predict externalizing problems. In both

regressions, participants' religiosity was entered in step 1. In step 2, parents' religiosity was entered.

Step one of the internalizing problem model was a good fit, $R^2 = .121$, and the overall relationship was significant, $F(5, 416) = 11.505, p < .0005$. Significant predictors in step one included participant extrinsic-social religiosity, $t(416) = 2.737, p = .006$, strength of religious faith, $t(416) = 3.167, p = .002$, and religious well-being, $t(416) = -5.755, p < .0005$. Step two did not improve model fit significantly, $F(10, 406) = 1.126, p = .341$. Overall, participant religious well-being $t(406) = -3.487, p = .001$, remained a significant predictor in step two, and perceived maternal religious well-being, $t(406) = -2.397, p = .017$, was a significant predictor in step two.

Step one of the externalizing problem model was a good fit, $R^2 = .136$, and the overall relationship was significant, $F(5, 416) = 13.148, p < .0005$. Significant predictors in step one included participant extrinsic-social religiosity, $t(416) = 3.345, p = .001$, and religious well-being, $t(416) = -4.817, p < .0005$. Step two was a good fit, $R^2 = .189$, and significantly improved model fit, $F(10, 406) = 2.613, p = .004$. Overall, participant extrinsic-personal religiosity, $t(406) = 2.042, p = .044$, participant religious well-being, $t(406) = -2.826, p = .005$, perceived paternal extrinsic-social religiosity, $t(406) = 2.540, p = .011$, and perceived maternal religious well-being, $t(406) = -2.714, p = .007$, were significant predictors in step two. Please see Tables 2 and 3 for a summary of predictor variables.

Table 2

Results for Final Step of Regression Predicting Internalizing Problems

Predictors	<i>b</i>	<i>SEb</i>	<i>Beta</i>	<i>t</i>	<i>p</i>
ROS-R Intrinsic (Self)	.079	.242	.043	0.326	NS
ROS-R Extrinsic Social (Self)	.352	.323	.074	1.089	NS
ROS-R Extrinsic Personal (Self)	.781	.413	.167	1.891	NS
SCSORF (Self)	.288	.239	.169	1.202	NS
RWB (Self)	-.472	.135	-.423	-3.487	.001
ROS-R Intrinsic (Mother)	.186	.273	.098	.681	NS
ROS-R Extrinsic Social (Mother)	.242	.409	.049	.591	NS
ROS-R Extrinsic Personal (Mother)	-.361	.498	-.073	-.725	NS
SCSORF (Mother)	.280	.271	.153	1.033	NS
RWB (Mother)	-.408	.170	-.326	-2.397	.017
ROS-R Intrinsic (Father)	-.352	.288	-.198	-1.224	NS
ROS-R Extrinsic Social (Father)	.141	.392	.028	.359	NS
ROS-R Extrinsic Personal (Father)	-.079	.450	-.017	-.175	NS
SCSORF (Father)	.055	.242	.035	.226	NS
RWB (Father)	.217	.165	.201	1.315	NS

Table 3

Results for Final Step of Regression Predicting Externalizing Problems

Predictors	<i>b</i>	<i>SEb</i>	<i>Beta</i>	<i>t</i>	<i>p</i>
ROS-R Intrinsic (Self)	.026	.196	.017	0.134	NS
ROS-R Extrinsic Social (Self)	.413	.262	.104	1.577	NS
ROS-R Extrinsic Personal (Self)	.677	.334	.174	2.024	.044
SCSORF (Self)	.022	.194	.016	.114	NS
RWB (Self)	-.310	.110	-.334	-2.826	.005
ROS-R Intrinsic (Mother)	.088	.221	.055	.396	NS
ROS-R Extrinsic Social (Mother)	-.427	.331	-.105	-1.290	NS
ROS-R Extrinsic Personal (Mother)	-.513	.403	-.125	-1.273	NS
SCSORF (Mother)	.333	.219	.219	1.519	NS
RWB (Mother)	-.374	.138	-.359	-2.714	.007
ROS-R Intrinsic (Father)	-.248	.233	-.168	-1.065	NS
ROS-R Extrinsic Social (Father)	.807	.318	.196	2.540	.011
ROS-R Extrinsic Personal (Father)	-.143	.364	-.037	-.392	NS
SCSORF (Father)	-.047	.196	-.036	-.242	NS
RWB (Father)	.251	.134	.280	1.878	NS

CHAPTER IV

DISCUSSION

Results indicated that intrinsic religiosity was correlated negatively with internalizing and externalizing problems. Moreover results indicated that extrinsic-social religiosity was correlated positively with internalizing and externalizing problems. These findings are consistent with prior research (Maltby & Day, 2002; Lindenthal et al., 1970) and suggest that being internally driven by religion is beneficial for mental health, but that being externally driven by religion—particularly by social factors—may have negative effects on mental health. Unlike extrinsic-social religiosity, extrinsic-personal religiosity did not share a significant relationship with internalizing or externalizing problems. The reason may be that individuals who seek out religion for external, social gains are experiencing more distress and so they attempt to cope with these potential health problems by seeking external social sources. Furthermore, these individuals not using religion for intrinsic reasons and may not be receiving the possible benefits of being intrinsically religious.

Results also indicated that participants' religiosity variables (i.e., intrinsic, extrinsic-social, extrinsic-personal) all were correlated positively with their corresponding perceived maternal and paternal religiosity variables. In other words, participants viewed their own levels of intrinsic and extrinsic religiosity in a manner similar to how they viewed both their maternal and paternal levels of intrinsic and

extrinsic religiosity. It may be the case that if parents were more religious for intrinsic reasons, their youth might be more likely to follow this pattern, as well. Similarly, if parents were more religious for personal or social reasons, youth also might be more likely to be religious for personal or social reasons. These findings may be the results of teaching and modeling. That is, youth acquire their values from watching and learning from their parents.

Also, mothers' and fathers' perceived intrinsic religiosity was correlated negatively with participants' internalizing and externalizing problems, mothers' and fathers' perceived extrinsic-social religiosity was correlated positively with participants' internalizing and externalizing problems, and mothers' and fathers' perceived extrinsic-personal religiosity shared no relationship with participants' internalizing and externalizing problems. These findings, related to maternal and paternal religiosity and participant mental health, match the findings related to participant religiosity and mental health. It may be the case that intrinsically motivated parents raise intrinsically motivated youth, as described above, who then experiences improved mental health associated with their intrinsic religiosity. Similarly, extrinsically motivated parents may raise extrinsically motivated children who go on to experience effects related to extrinsic religiosity.

In step one (participant variables only) of the hierarchical regression predicting internalizing problems, extrinsic-social religiosity, strength of religious faith, and religious well-being were significant predictors, suggesting that as extrinsic-social religiosity and strength of religious faith increase, internalizing problems increase, and that as religious well-being increases, internalizing problems decrease. In step two

(adding parent variables), extrinsic-social religiosity and strength of religious faith were no longer significant predictors, suggesting mediation of some participant variables, whereas religious well-being remained a significant predictor. Among the parenting variables, only maternal religious well-being was a significant predictor. Interestingly, participant intrinsic and extrinsic-social religiosity both share a significant zero-order correlation with internalizing problems. However, when examined simultaneously in step one, participant intrinsic religiosity is no longer significant. Further, the final step demonstrates that only religious well-being of the participant (*part* $r = -.160$) and mother (*part* $r = -.110$) were significant predictors among all the variables examined, suggesting that participant extrinsic-social religiosity and strength of religious faith are mediated in the second step.

Religious well-being of the mother and participant may be the only important factors among the variables examined for predicting internalizing problems because of influences of mothers on their youth. Research demonstrates that mothers, on average, spend more time with their youth and spend more time caring for their youth than fathers, who spend more time than mothers playing with their youth (Bianchi, Robinson, & Milkie, 2006). These increased levels of care may account for the increased influence of mothers when compared to fathers, when examining religious well-being. Finally, it may be the case that religious well-being is the most important predictor because, regardless of how youth adopt their religion, it may ultimately be how well they feel about their religion to be the determining factor in predicting internalizing problems.

In step one of the hierarchical regression predicting externalizing problems, participant extrinsic-social religiosity and religious well-being were significant

predictors, suggesting that as extrinsic-social religiosity increases, externalizing problems increase, and that as religious well-being increases, externalizing problems decrease. In step two, participant extrinsic-social religiosity was no longer significant, suggesting mediation. Participant religious well-being (*part r* = -.126 in the final step) remained a significant predictor across steps, and perceived maternal religious well-being (*part r* = -.121) and perceived paternal extrinsic-social religiosity (*part r* = .114) were significant predictors in step 2. Further, participant extrinsic-personal religiosity (*part r* = .090 in the second step) became a significant predictor in step two. Similar to the internalizing problem model, participant intrinsic religiosity is not a significant predictor in any step of the model, participant extrinsic-social religiosity is mediated, and participant and maternal religious well-being are significant predictors. Dissimilar to the internalizing problem model, participant extrinsic-personal religiosity became a significant predictor from step one to step two and perceived paternal extrinsic-social religiosity was a significant predictor.

Participants who endorse extrinsic-personal items such as “I pray mainly to gain relief and protection” may be extrinsically religious to gain support from their externalizing problem behaviors. For example, participants who act aggressively may be religious so that they feel less guilty about their actions. Additionally, participants who perceive their fathers as being extrinsic-socially religious may model their fathers’ behaviors, which may include aggression, in addition to extrinsic motivation. Research does suggest that males may be more instrumental in their practices when compared to females (Bem, 1974; Spence, 1993).

Implications for Practice

These findings suggest the importance for individuals—most of whom have some type of religious beliefs—to examine their own religious beliefs. By doing so, individuals may observe what their religious orientation, strength of religious faith, and religious well-being are, and understand how those characteristics may be related to their internalizing and externalizing behaviors. Specifically, the current study especially suggests the importance for parents to understand how their religiosity may influence their youths' religiosity and mental health, and for youth to understand how their parents' religiosity may influence their mental health and own religiosity, which in turn may influence their mental health, as well.

The current study also suggests that religion may play a strong role in determining mental health. Thus, practitioners who strive to improve mental health of their clients are encouraged to explore the different aspects of their clients' religiosity. In fact, incorporating a client's religiosity into treatment has been shown to have ameliorative effects, particularly when religiosity is important to the client (De Mamani, Tuchman, & Duarte, 2010). By incorporating religiosity, not only will the clinicians will gain insight into their clients, but they may also be able to investigate the client's internalizing and externalizing problems and discover possible treatment plans incorporating religiosity.

Limitations and Future Research

The findings of this study must be viewed in the context of its limitations. One limitation may be the generalizability of the findings. The sample consisted of late adolescent college students who were predominantly Caucasian and African-American.

Although this sample was specifically selected to examine the effects of personal and parental religiosity in late adolescents, caution must be taken when generalizing to other samples that are dissimilar to the current sample. Furthermore, the study involved an overwhelming majority of participants who identified themselves as Christians. Different groups of individuals may experience religiosity and their parents' religiosity in different ways. Future research should use a broader sample of individuals from various ages, regions, and religious affiliations. Also, future research may examine whether different denominations exhibit different religious orientations. In addition, the current study did not examine individuals who describe themselves as atheists, agnostics, or spirituals. It may be interesting for future research to examine people's spirituality in general, as opposed to religiosity. Another limitation of the current study is its design. Correlational in nature, this study is unable to determine causation. Furthermore, many other factors not studied here may influence religiosity and mental health.

Another limitation of this study is that it relied solely on the self-report of late adolescent college students. What participants experienced and recalled may differ from what mothers and fathers experienced and would recall or even from what actually occurred. Future research should be aimed at collecting data from parents, as well as completing more formal mental health assessments. Additionally, each individual religiosity item were presented in order (i.e., ROS-R question 1 was presented for the participant, the mother, and then the father, and then the participant proceeded to question 2). With this format, the participants may have scored their responses for themselves and their parents similarly because the items were presented right after each other. In the future, items can be presented randomly. Future research may include parenting

measures to examine how parenting may influence participant religiosity, and further exploring why maternal RWB was a more significant predictor than paternal RWB.

Future research should also investigate why extrinsic-personal religiosity becomes an important predictor for externalizing problems including a probing into the reason why extrinsic-personal and extrinsic-social religiosity share different relationships with internalizing and externalizing problems.

Conclusion

When examining participant and parental religiosity variables (i.e., intrinsic and extrinsic religiosity, strength of religious faith, and religious well-being), past research has found that different factors of religiosity affect current psychological adjustment. However, When examined independently with correlations, the current study found that participant and perceived parental intrinsic religiosity were correlated negatively with participants' internalizing and externalizing problems, extrinsic-social religiosity was correlated positively with participants' internalizing and externalizing problems, and extrinsic-personal religiosity had no correlation with participants' internalizing and externalizing problems. Additionally, perceived parental religiosity variables correlated positively with the participants' religiosity variables, respectively (e.g., perceived maternal and paternal intrinsic religiosity correlated positively with participant intrinsic religiosity).

Some of the relationships found when using correlations were altered upon examining them with regression. Specifically, hierarchal regression indicated that participant and maternal religious well-being were significant predictors of internalizing

and externalizing problems, but that participant intrinsic religiosity was not a significant predictor in any step of the regressions. That was true even though it initially shared a significant zero-order correlation. Further, the effect of participant extrinsic-social religiosity was mediated after adding parental religiosity factors. When examining externalizing problems only, participant extrinsic-personal religiosity became a significant predictor in the final step of the regression, although it was not significant in the prior step, or when examined with correlation. In addition, perceived paternal extrinsic-social religiosity was a significant predictor for externalizing problems only.

Although the correlations support past research by indicating that intrinsic religiosity is beneficial for mental health and that extrinsic religiosity is detrimental for mental health, regression analyses depict contrary results. That is, the effects of participant extrinsic social religiosity are mediated and participant intrinsic religiosity is not significant at any point. Instead, participant and maternal religious well-being are the most significant predictors, suggesting that how satisfied individuals are with their religion and how satisfied they perceive their mothers to be with their religion are most important. It may be the case that satisfaction with religion is most important rather than the manner of how that religion is practiced.

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APPENDIX A
DEMOGRAPHIC QUESTIONNAIRE

- a. Doctoral degree
Bachelor degree
Masters degree
- b. Associates degree
Highschool diploma/GED
- c. If none of the above, please indicate highest grade completed: _____

APPENDIX B
ADULT SELF-REPORT

Adult Self Report/Adult Behavior Checklist

Below is a list of items that describe people. As you read each item, please decide whether it has been true of yourself over the past 6 months. Then select 0, 1, or 2 according to the scale provided below to describe the person. Please answer all items as well as you can, even if some do not seem to apply.

0 = Not True

1 = Somewhat or Sometimes True

2 = Very True or Often True

1. Is too forgetful
2. Makes good use of his/her opportunities
3. Argues a lot
4. Works up to ability
5. Blames others for own problems
6. Uses drugs (other than alcohol or nicotine) for nonmedical purposes
7. Bragging, boasting
8. Can't concentrate, can't pay attention for long
9. Can't get mind off certain thoughts; obsessions
10. Can't sit still, restless, or hyperactive
11. Too dependent on others
12. Complains of loneliness
13. Confused or seems to be in a fog
14. Cries a lot
15. Is pretty honest
16. Cruelty, bullying, or meanness to others
17. Daydreams or gets lost in his/her thoughts
18. Deliberately harms self or attempts suicide
19. Demands a lot of attention
20. Damages or destroys his/her own things
21. Damages or destroys things belonging to others
22. Worries about his/her future
23. Breaks rules at work or elsewhere
24. Doesn't eat well
25. Doesn't get along with other people
26. Doesn't seem to feel guilty after misbehaving
27. Easily jealous
28. Gets along badly with family
29. Fears certain animals, situations, or places
30. Poor relations with opposite sex
31. Fears he/she might think or do something bad
32. Feels he/she has to be perfect
33. Feels or complains that no one loves him/her
34. Feels others are out to get him/her
35. Feels worthless or inferior

36. Gets hurt a lot, accident-prone
37. Gets in many fights
38. His/her relations with neighbors are poor
39. Hangs around people who get in trouble
40. Hears sounds or voices that aren't there
41. Impulsive or acts without thinking
42. Would rather be alone than with others
43. Lying or cheating
44. Feels overwhelmed by responsibilities
45. Nervous, highstrung, or tense
46. Nervous movements or twitching
47. Lacks self-confidence
48. Not liked by others
49. Can do certain things better than other people
50. Too fearful or anxious
51. Feels dizzy or lightheaded
52. Feels too guilty
53. Has trouble planning for the future
54. Feels tired without good reason
55. Moods swing between elation and depression
56. Physical problems **without known medical cause:**
 - a. Aches or pains (**not** stomach or headaches)
 - b. Headaches
 - c. Nausea, feels sick
 - d. Problems with eyes (**not** if corrected by glasses)
 - e. Rashes or other skin problems
 - f. Stomachaches
 - g. Vomiting, throwing up
 - h. Heart pounding or racing
 - i. Numbness or tingling in body parts
57. Physically attacks people
58. Picks skin or other parts of his/her body
59. Fails to finish things he/she should do
60. There is very little that he/she enjoys
61. Poor work performance
62. Poorly coordinated or clumsy
63. Would rather be with older people than with people of own age
64. Has trouble setting priorities
65. Refuses to talk
66. Repeats certain acts over and over; compulsions
67. Has trouble making or keeping friends
68. Screams or yells a lot
69. Secretive, keeps things to self
70. Sees things that aren't there

71. Self-conscious or easily embarrassed
72. Worries about his/her family
73. Meets responsibilities to his/her family
74. Showing off or clowning
75. Too shy or timid
76. Irresponsible behavior
77. Sleeps more than most other people during day and/or night
78. Has trouble making decisions
79. Speech problem
- 80a. Stares blankly
- 80b. Stands up for own rights
81. Very changeable behavior
82. Steals
83. Is easily bored
84. Strange behavior
85. Strange ideas
86. Stubborn, sullen, or irritable
87. Sudden changes in mood or feelings
88. Enjoys being with people
89. Rushes into things without considering the risks
90. Drinks too much alcohol or gets drunk
91. Talks about killing self
92. Does things that may cause trouble with the law
93. Talks too much
94. Teases a lot
95. Temper tantrums or hot temper
- 96a. Passive or lacks initiative
- 96b. Thinks about sex too much
97. Threatens to hurt people
98. Likes to help others
99. Dislikes staying in one place for very long
100. Has trouble sleeping
101. Stays away from job even when not sick and not on vacation
102. Underactive, slow moving, or lacks energy
103. Unhappy, sad, or depressed
104. Is unusually loud
105. Is disorganized
106. Tries to be fair to others
107. Feels he/she can't succeed
108. Tends to lose things
109. Likes to try new things
- 110a. Makes good decisions
- 110b. Wishes he/she was of the opposite sex
111. Withdrawn, doesn't get involved with others
112. Worries

- 113a. Sulks a lot
- 113b. Worries about his/her relations with the opposite sex
114. Fails to pay his/her debts or meet other financial responsibilities
115. Is restless or fidgety
116. Gets upset too easily
117. Has trouble managing money or credit cards
118. Is too impatient
119. He/she is not good at details
120. Drives too fast
121. Tends to be late for appointments
122. Has trouble keeping a job
123. He/she is a happy person
124. **In the past 6 months**, about how many times per day did he/she use tobacco (including smokeless tobacco)?
_____ times per day
125. **In the past 6 months**, on how many days was he/she drunk?
_____ days
126. **In the past 6 months**, on how many days did he/she use drugs for nonmedical purposes (including marijuana, cocaine, and other drugs, except alcohol and nicotine)?
_____ days

APPENDIX C

RELIGIOUS ORIENTATION SCALE- REVISED

Religious Orientation Scale- Revised

Instructions: Please rate how much you agree or disagree with each statement based on how **you** view religion, how your **mother** views religion, and how your **father** views religion.

- 1 = strongly disagree
2 =
3 =
4 =
5 = strongly agree

1. I enjoy reading about my religion.
_____ Self _____ Mother _____ Father
2. I go to church because it helps me to make friends.
_____ Self _____ Mother _____ Father
3. It doesn't matter so much what I believe so long as I am good.
_____ Self _____ Mother _____ Father
4. It is important to me to spend time in private thought and prayer.
_____ Self _____ Mother _____ Father
5. I have often felt a strong sense of God's presence.
_____ Self _____ Mother _____ Father
6. I pray mainly to gain relief and protection.
_____ Self _____ Mother _____ Father
7. I try hard to live all my life according to my religious beliefs.
_____ Self _____ Mother _____ Father
8. What religion offers me most is comfort in times of trouble and sorrow.
_____ Self _____ Mother _____ Father
9. Prayer is for peace and happiness.
_____ Self _____ Mother _____ Father
10. Although I am religious, I don't let it affect my daily life.
_____ Self _____ Mother _____ Father
11. I go to church mostly to spend time with friends.
_____ Self _____ Mother _____ Father

12. My whole approach to life is based on my religion.

_____ Self

_____ Mother

_____ Father

13. I go to church mainly because I enjoy seeing people I know there.

_____ Self

_____ Mother

_____ Father

14. Although I believe in my religion, many other things are more important in life.

_____ Self

_____ Mother

_____ Father

APPENDIX D

SANTA CLARA STRENGTH OF RELIGIOUS FAITH QUESTIONNAIRE

Santa Clara Strength of Religious Faith Questionnaire

Please answer the following questions about **your** religious faith, your **mother's** religious faith, and your **father's** religious faith using the scale below. Indicate the level of agreement (or disagreement) for each statement.

- 1 = strongly disagree
2 = disagree
3 = agree
4 = strongly agree

1. My religious faith is extremely important to me.
_____ Self _____ Mother _____ Father
2. I pray daily.
_____ Self _____ Mother _____ Father
3. I look to my faith as a source of inspiration.
_____ Self _____ Mother _____ Father
4. I look to my faith as providing meaning and purpose in my life.
_____ Self _____ Mother _____ Father
5. I consider myself active in my faith or church.
_____ Self _____ Mother _____ Father
6. My faith is an important part of who I am as a person.
_____ Self _____ Mother _____ Father
7. My relationship with God is extremely important to me.
_____ Self _____ Mother _____ Father
8. I enjoy being around others who share my faith.
_____ Self _____ Mother _____ Father
9. I look to my faith as a source of comfort.
_____ Self _____ Mother _____ Father
10. My faith impacts many of my decisions.
_____ Self _____ Mother _____ Father

APPENDIX E
RELIGIOUS WELL-BEING SCALE

Religious Well-Being Subscale

Please respond to each of the statements using the scale below.

- 1 = strongly disagree
2 = moderately disagree
3 = disagree
4 = moderately agree
5 = agree
6 = strongly agree

1. I don't find much satisfaction in private prayer with God.
_____ Self _____ Mother _____ Father
2. I believe that God loves me and cares about me.
_____ Self _____ Mother _____ Father
3. I believe that God is impersonal and not interested in my daily situations.
_____ Self _____ Mother _____ Father
4. I have a personally meaningful relationship with God.
_____ Self _____ Mother _____ Father
5. I don't get much personal strength and support from my God.
_____ Self _____ Mother _____ Father
6. I believe that God is concerned about my problems.
_____ Self _____ Mother _____ Father
7. I don't have a personally satisfying relationship with God.
_____ Self _____ Mother _____ Father
8. My relationship with God helps me not to feel lonely.
_____ Self _____ Mother _____ Father
9. I feel most fulfilled when I'm in close communion with God.
_____ Self _____ Mother _____ Father
10. My relation with God contributes to my sense of well-being.
_____ Self _____ Mother _____ Father

APPENDIX F
CONSENT STATEMENT

Informed Consent & Debriefing

Introductory Text (provided by online survey system):

This study consists of an online survey, which you may now participate in if you are at least 18 years of age. You will receive credit immediately upon completion of the survey. You will be identified to researchers only by a unique numeric ID code; this code is not connected in any way to your name, net ID, email address, or any other identifying information. The survey consists of a number of multiple-choice and/or free-answer questions, and may be divided into a number of sections. You must complete all sections in one sitting, as you are not allowed to resume at another time from where you left off. While you are participating, your responses will be stored in a temporary holding area on your computer as you move through the sections, but they will not be permanently saved until you complete all sections and you are given a chance to review your responses.

Informed Consent:

This research is being conducted by Leah Power and Dr. Cliff McKinney, of the Department of Psychology, Mississippi State University. This study examines the relationship among personal and parental religiosity and other outcomes.

By providing informed consent and participating, you are stating that you are at least 18 years of age. Participation will take approximately ____ minutes. When you submit your questionnaire, you will automatically receive ____ credits in the Psychology Research Program.

Reading and answering the questions in this study could cause you to feel uncomfortable. This risk is believed to be minimal, but you should carefully consider this possible risk before agreeing to participate. If you agree to participate, you should feel free to skip any question(s) that you do not wish to answer; there is no penalty for choosing not to answer questions.

Your name and identifying information will **NEVER** be connected in any way to your responses in this study. Not even the experimenter could connect your name or other identifying information to your responses. The online system will automatically grant you credit when you submit your responses, but your responses are sent separately from your identity so that the system knows that you submitted the survey, but your survey responses are not connected to your identity.

If you have any questions about this research project, please contact Leah Power at xxx-xxx-xxxx or Dr. McKinney at 662-325-3782. For questions regarding your rights as a research participant, or to express concerns or complaints, please feel free to contact the MSU Regulatory Compliance Office by phone at 662-325-3994, by e-mail at irb@research.msstate.edu, or on the web at <http://orc.msstate.edu/participant/>.

If you feel upset, uncomfortable, depressed, or anxious as a result of completing this study, you are encouraged to contact the MSU Counseling Center at 662 325-2091. If you

call this number after hours, you will hear a recording that instructs you about how to contact a counselor directly.

Please understand that your **participation is voluntary**, your **refusal to participate will involve no penalty or loss** of benefits to which you are otherwise entitled, and you **may discontinue your participation** at any time without penalty or loss of benefits. You are encouraged to print a copy of this form for your records, or you may request one at a later time from Leah Power at lp23@msstate.edu or Dr. McKinney at cm998@msstate.edu. If you agree to participate, please begin the survey. By beginning the survey, you are acknowledging that you are at least 18 years of age, have read this informed consent and understand it, and agree to participate.

APPENDIX G
DEBRIEFING STATEMENT

Debriefing Statement:

The survey is now complete and all responses have been saved. Please read the following information, print it for your records, and then use the link at the bottom of this page to continue using the site.

Thank you for your participation! We are interested in examining _____. If you have any questions about this study, please contact Leah Power at xxx-xxx-xxxx or Dr. McKinney at 662-325-3782. If you feel upset, uncomfortable, depressed, or anxious as a result of completing this study, you are encouraged to contact the MSU Counseling Center at (662) 325-2091. If you call this number after hours, you will hear a recording that instructs you about how to contact a counselor directly.

Thank you again for your participation in this study!

APPENDIX H
IRB APPROVAL LETTER

October 11, 2010

Leah Power
200 Hartness Street
Apt G3
Starkville, MS 39759

RE: IRB Study #10-285: Personal and Parental Religiosity: The Effects on Individual's Psychopathology

Dear Ms. Power:

The above referenced project was reviewed and approved via administrative review on 10/11/2010 in accordance with 45 CFR 46.101(b)(2). Continuing review is not necessary for this project. However, any modification to the project must be reviewed and approved by the IRB prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The IRB reserves the right, at anytime during the project period, to observe you and the additional researchers on this project.

Please note that the MSU IRB is in the process of seeking accreditation for our human subjects protection program. As a result of these efforts, you will likely notice many changes in the IRB's policies and procedures in the coming months. These changes will be posted online at <http://www.orc.msstate.edu/human/aahrpp.php>. The first of these changes is the implementation of an approval stamp for consent forms. The approval stamp will assist in ensuring the IRB approved version of the consent form is used in the actual conduct of research.

Please refer to your IRB number (#10-285) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at cwilliams@research.msstate.edu or call [662-325-5220](tel:662-325-5220).

Sincerely,

Christine Williams
IRB Compliance Administrator