

THE EFFECT OF RELIGIOSITY ON PARENTING A CHILD WITH AUSTISM
SPECTRUM DISORDER

by

Kristin Faciane

Submitted in partial fulfillment of the
requirements for Departmental Honors in
the Department of Psychology
Texas Christian University
Fort Worth, Texas

May 4, 2015

THE EFFECT OF RELIGIOSITY ON PARENTING A CHILD WITH AUSTISM
SPECTRUM DISORDER

Project Approved:

Supervising Professor: Naomi Ekas, Ph.D.

Department of Psychology

Cathy Cox, Ph.D.

Department of Psychology

Tracy Dietz, Ph.D.

Department of Social Work

Abstract

Due to the stress mothers of children with autism spectrum disorder experience (ASD), mothers turn to a variety of resources, including religiosity, to cope. This study examined the relationship between religiosity and maternal well-being. Christian mothers of children with ASD completed questionnaires assessing anxiety, marital satisfaction, maternal child perception, maternal ASD symptomatology, and several aspects of religiosity, including religious practice, spirituality, religious coping, and religious support. Analyses revealed that both maternal child perception and marital satisfaction served as mediators in the relationship between certain religiosity variables and a mother's anxiety. Specifically, a mother's daily spiritual experience, private religious practice, organized religious practice, and anticipated religious support predicted increased marital satisfaction which in turn predicted lower levels of maternal anxiety. Additionally, a mother's daily spiritual experience, organized religious practice, positive religious coping, and anticipated religious support predicted increased parental child perception which in turn predicted lower levels of maternal anxiety. Furthermore, mothers who showed more ASD symptoms themselves reported higher levels of negative religious interactions. Overall, religiosity can benefit mothers of children with ASD, yet may be difficult for mothers who show higher ASD symptomatology.

Table of Contents

INTRODUCTION7

 Mothers of Children with ASD and Stress7

 Resiliency.....#

 Religion and Well-Being#

 Religious Coping#

 Current Study#

METHOD#

 Participants.....#

 Procedure#

 Measures#

 Religiosity.....#

 Maternal Child Perception#

 Maternal Autism Symptomatology.....#

 Marital Satisfaction.....#

 Anxiety.....#

RESULTS#

 Descriptive Statistics.....#

 Covariates#

 Marital Satisfaction, Religiosity, and Anxiety.....#

 Maternal Child Perception, Religiosity, and Anxiety.....#

 Maternal Autism Symptomatology and Religiosity#

DISCUSSION.....#

Limitations and Future Research#

Conclusion#

REFERENCES#

Introduction

Autism spectrum disorder (ASD) is a developmental disorder that affects 1 in 68 children (CDC, 2014). ASD is characterized by difficulties communicating, problems relating with others in social settings, and atypical repetitive behaviors (American Psychiatric Association, 2013). As stated in the name, children with ASD display a variety of symptom severity, with some functioning at higher levels than others. In addition to the core symptoms, children with ASD often deal with comorbid ADHD, anxiety, and depression (Lawson et al., 2014). The lifelong nature of the disorder, combined with the problematic symptoms, present unique issues in parenting a child with ASD. Given the heightened levels of stress connected with parenting a child with ASD (Bitsika & Sharpley, 2004), parents must find ways to cope. Indeed, many parents of children with ASD reported optimal levels of psychological well-being (Bitsika, Sharpley, & Bell, 2013). The current study examined the role of spirituality and religiosity as a potential coping mechanism for mothers of children with ASD.

Mothers of Children with ASD and Stress

Parenting a child with ASD includes added stressors above and beyond the responsibilities of parenting a typically developing child. Learning about ASD and how to parent children with ASD requires costly outside help. Added financial obligations, including diagnostic tests and behavioral therapy, diminish parents' money. Furthermore, mothers of children with ASD often felt alone, through a lack of social support and poor acceptance of their child's behavior in public (Boyd, 2002). ASD-related parenting challenges, along with typical life struggles, contribute to the stress mothers of children with ASD experience.

While parenting in general is challenging, mothers of children with ASD have been shown to have greater negative outcomes when compared to other populations. In comparison to mothers of typically developing children, mothers of children with ASD reported increased levels of depression, anxiety, and stress (Bitsika & Sharpley, 2004). Additionally, in comparison to mothers of children with other developmental disabilities, mothers of children with ASD showed greater anxiety (Dabrowska & Pisula, 2010). Unique behavioral problems, such as acting out in public, repetitive behaviors, and difficulties with social connections distinguish children with ASD from children with other disorders. Higher behavioral problems and symptom severity, within children with ASD, were associated with increased maternal stress and depression (Benson & Karlof, 2009; Hastings et al., 2005). Overall, mothers of a child with ASD, especially those with a lower functioning child, encounter difficult situations that could lead to increased stress.

Because ASD is not a disorder that can be diagnosed prenatally, the diagnosis is often unexpected and can occur when the child is older. Thus, mothers are given the task of redefining their perception and expectations for their child, in addition to finding acceptance in their child's diagnosis. When compared to mothers of children with Down Syndrome, mothers of children with ASD took longer to accept their child's diagnosis (Natsubori, 2001). The differences in the diagnosis process, as well as varying symptoms, helped account for the time difference. Mothers of children with ASD who viewed their child positively, reported higher well-being; whereas mothers who had a negative perception of their child reported more negative affect (Lickenbrock, Ekas, & Whitman, 2010). Additionally, the level of psychological acceptance of their child's disorder served as a link between the child's behavior and the mother's anxiety, depression, and stress

(Jones, Hastings, Totsika, Keane, & Rhule, 2014). Essentially, the way a mother views her child with ASD can enhance or diminish her own well-being.

Increases in stress and depressive symptoms has been shown to contribute to further adverse outcomes by negatively influencing other relationships the mother has, especially her marriage (Kersh, Hedvat, Hauser-Cram, & Warfield, 2006). Parenting a child with ASD led to demands that stretched a couple's relationship, especially during the primary years (Hock, Timm, & Ramisch, 2012). Additionally, challenges placed on mothers, such as increased child behavioral problems and decreased mother-child closeness, were linked to lower marital satisfaction and family cohesion (Hartley, Barker, Baker, Seltzer, & Greenburg, 2012; Higgins, Bailey, & Pearce, 2005). High marital stress not only hindered the parents' relationship, but the siblings' relationship with each other as well (Rivers & Stoneman, 2003). However, parents who adjusted their marriage in relation to their child's struggles, reported lower negative affect (Lickenbrock et al., 2011). Although mothers of children with ASD reported lower satisfaction with their marriage (Bitsika et al., 2013), strong communication skills and similar marriage ideals promoted stronger marriages within this population (Ramisch, Onaga, & Oh, 2014).

While both parents are presented with the task of parenting a child with ASD, mothers may be affected more so than fathers. Foody, James, and Leader (2014) found that mothers experienced more anxiety, depression, and distress as compared to fathers. This may be due to gender roles and expectations of mothers to bear more of the child care role, as well as increased time with the child. Additionally, mothers felt they were not getting the help they needed in daily activities, such as household chores and child care, from their spouses (Johnson & Simpson, 2013). Mothers experienced higher fatigue

and higher levels of feeling “stretched beyond their resources” (Bitsika et al., 2013).

Overall, mothers of children with ASD are presented with unique challenges that can lead to added stress, depression, and anxiety.

Resiliency

With all of the possible pressures and challenges of parenting a child with ASD, a mother’s well-being can be compromised; however, despite these potential challenges there are many mothers who show positive outcomes. Resilience refers to the ability of one to positively react to current stressors and to resist potential negative effects of future struggles (Luthar & Cicchetti, 2000). Certain protective factors, buffers against negative outcomes in the face of adversity, are responsible for maintaining and promoting positive well-being. Protective factors can be individual factors, such as genetics, or external factors, such as social support. These protective factors contribute to a person’s overall resiliency.

Research has identified several protective factors in mothers of children with ASD, including the age of the child, social support, and religious beliefs. For example, mothers of older children with ASD reported less burden and less stress when compared to mothers of younger children (Ekas & Whitman, 2010; Hartley, Barker, Seltzer, Greenberg, & Floyd, 2011). Another factor that positively influences mother’s coping is social support. Social support refers to having a source of support from others through intimate relationships, including a spouse or friends, or formal help, such as support groups. Mothers who received social support reported lower negative impact of having a child with ASD, as well as lower levels of depression and stress (Bishop, Richler, Cain & Lord, 2007; Ekas, Lickenbrock, & Whitman, 2010). In addition, social support increased a

mother's ability to relate to her child emotionally (Boyd, 2002). The presence of social support in a mother's life appears to be beneficial for the mother's well-being and the quality of the parent-child relationship.

Though not highly researched in parents of children with ASD, religion and spirituality can also play a role in parental coping. Ekas and colleagues (2009) found that, within mothers of children with ASD, religious beliefs and spirituality were associated with better positive outcomes, such as higher self-esteem, a more optimistic outlook on life, lower depression, and higher life satisfaction. Furthermore, positive religious coping was related to greater stress-related growth for parents of children with ASD (Tarakeshwar & Pargament, 2001). In addition to the benefits of religious acts, parents have an outlet for further social support through church congregations and an invisible higher being. Overall, parents can find comfort, meaning, and social support through an organized religion and an active spiritual life. The current study expanded upon the aforementioned research by including additional dimensions of spirituality and religiosity and examining their impact on mothers' well-being.

Religion and Well-Being

There are several aspects of religiosity that can contribute to a person's life, including spirituality, organized religious activity and beliefs, private religious practice, and congregation support. Spirituality is defined as an individual's experience with the sacred (Weaver, Pargament, Flannelly, & Oppenheimer, 2006). Spirituality has been found to increase psychological health, through increased levels of self-actualization and meaning of life (Hill & Pargament, 2008), as well as physical health through quick recovery from chronic illness (Piedmont, 2004). Among parents of children with ASD,

spirituality was a strong predictor of positive outcomes, even after accounting for other aspects of religiosity (Ekas et al., 2009). The current study included measures of spirituality, in the context of religion, to examine its' effects on maternal well-being.

While spirituality and religion are often related to one another, individuals can pursue spirituality through non-religious ways (Sheldrake, 2007). Religion refers to the institutionalized set of beliefs and activities associated with a sacred power or God (Weaver et al., 2006). While spirituality is the search for God, religion provides the means and method to enhance one's relationship with God. A person can increase their closeness to God through private practice, such as praying, or public practice, such as Bible studies or church services. However, religious activities can be completed without an increased spirituality, in which Hill and Pargament (2008) labeled "empty religion". When religious spirituality was compared to non-religious based spirituality, people who expressed spirituality through religion had greater spiritual health and immunity to stressful situations (Graham, Furr, Flowers, & Burke, 2001). Within religion, spirituality was seen as the link between religious activity and well-being (Ivtzan, Chan, Gardner, & Prashar, 2013). The current study examined the effects of private religious practice, organized religious practices, and daily spiritual experiences within Christian mothers of children with ASD.

Within religion, individuals have utilized different domains to increase coping with life stresses and events (Ivtzan, et al., 2013; Pargament, Koenig, & Perez, 2000). Individuals can cope through organized religious practices, such as attending a church service, or private religious practice, such as prayer. High organized religious activity and church involvement was linked to fewer depressive symptoms and higher positive affect

among younger and older adults (Patrick & Kinney, 2003). Additionally, prayer was associated with better health, greater support, and more positive experiences with God within parents of children with ASD (Coulhard & Fitzgerald, 1999; Poston & Turnbull, 2004). Along with religious practices assisting in coping, mothers can utilize religious coping, described further in the paper as positive or negative thought processes pertaining to God.

Further than just impacting mothers through affect, religiosity can also positively impact a mother's well being through her relationships. Mothers in high-risk populations who reported a higher sense of life purpose and closeness to God also reported lower parental stress and better parent-child interactions (Lamis, Wilson, Tarantino, Lansford, & Kaslow, 2014). Along with better family interactions, higher spiritual cognition and beliefs were linked to higher marriage satisfaction within older married couples (Sabey, Rauer, & Jensen, 2014). Additionally, newlyweds within the general population who reported being highly religious, had better marriage adjustment than those who were less religious (Schramm, Marshall, Harris, & Lee, 2012). Higher levels of church attendance was also linked to decreased odds of divorce among Black and White American couples (Brown, Orbuch, & Bauermeister, 2008). The Christian view on marriage and divorce could influence the types of marriages highly religious people are entering as well as their commitment to remain married. In all, religiosity can positively influence marriages, especially for those who valued religion prior to getting married.

While private and organized religious activities can be beneficial, mothers with a child with ASD who were highly involved in religious activity reported high parental stress (Ekas et al., 2009). This increase of stress can be attributed to the findings that

mothers of children with disabilities felt unsupported by the church (Ault, Collins, & Carter, 2013). A study of children with ASD found that 30% of the parents felt abandoned by their church (Tarakeshwar & Pargament, 2001). This lack of support can be contributed to limited accommodations for their children, poor acceptance of their children, and unrealistic expectations for parental church involvement. This study included a measure of anticipated church support and negative church interactions and examined the effects on various aspects of maternal well-being to further learn about the social aspect of religion.

Religious Coping

Due to the benefits of religion on well-being, the use of religious ideas in coping with negative life events has emerged in recent research. Pargament (2002) defines religious coping as having a negative or positive focus, when applied to God. Negative religious coping derives from strife in one's religious view and an unstable relationship with God. Methods for this type of coping include questioning God's power, blaming God for difficulties, and attributing negative situations to a punishment for sin. In contrast, positive religious coping stems from a secure relationship with God, a view that meaning can be found even in negative situations, and high spirituality. Positive religious coping can be seen through seeking support from God, trusting God's power, and viewing negative situations as an opportunity for growth. This type of positive religious coping has been linked to lower depression, better quality of life, less anxiety, and more positive affect (Pargament, 2002). Negative religious coping, on the other hand, was linked to greater anxiety, depression, and psychological distress (Pargament, 2002).

Further, among bereaving families, negative religious coping heightened reactivity and prolonged grief recovery (Lee, Roberts, & Gibbons, 2012).

The use of religious coping can be applied to mothers of children with ASD in coping with the difficulties of parenting. Tarakeshwar and Pargament (2001) examined how mothers of children with ASD used negative and positive religious coping in their daily life. Negative religious coping was linked to greater depressive affect and lower religious outcomes. Parents using negative religious coping may view their child as a punishment from God or feel that God has given them too much to handle. However, positive religious coping was associated with better religious outcomes, such as perceived closeness to God, strengthened spirituality, and greater stress-related growth. Those who utilized positive religious coping focused on the positive aspects of God, such as His sovereignty and goodness, and may view their children as a gift, rather than a mistake or punishment. Overall, religion and spirituality can offer positive outcomes to mothers of children with ASD, yet may have a darker side within certain contexts.

Current Study

Due to the small amount of research investigating the role of religion in the lives of mothers of children with ASD, the current study serves to further examine the relationship between religion and a mother's well-being. This study examined the frequency that mothers invested in private religious practices, organized religious practices, daily spiritual experiences, and religious coping to gain a better understanding on the role a mother's own religiousness and spirituality plays in her psychological well-being. Additionally, I examined how a mother's religiosity affected her social relationships, in the church setting through anticipated religious support and negative

religious interactions, as well as intimate relationships outside of the church, including her marriage and perception of her child. Specifically, I examined the relationship between religious activity and anxiety, with the social aspects serving as mediators. I hypothesized that higher religious activity would result in lower anxiety. Due to the connections between religiosity, marriage satisfaction, and maternal child perceptions, I hypothesized that high levels of religiosity would increase marital satisfaction and maternal child perceptions, and thus decrease anxiety. In addition, I also examined the relationship between a mother's own autism symptomatology on her social relationships. I hypothesized that mothers who displayed more autism-related characteristics, such as rigid speech, would have more negative interactions within the church. Through this study, I hoped to elucidate the processes by which religiosity affects different aspects of a mother's life, thus affecting her overall well-being.

Method

Participants

Participants consisted of 75 mothers children with ASD who identified as Christian. Mothers ranged in age from 28-56, ($M= 40.55$, $SE= 6.31$). Mothers in the study had at least one child with ASD between the ages of 2 and 18 ($M= 9.40$, $SE= 3.94$). The children were predominately male (89.3%). The majority of mothers were married (94.7%), with the remainder being divorced (4.0%), or single (1.3%). Additionally, most mothers were Caucasian (82.7%), followed by Hispanic (17.3%), African American (4.0%), or Pacific Asian (1.3%). Families were predominantly upper middle class; specifically, only 5.3% had annual household incomes below \$24,999, 36% had incomes between \$25,000 and \$74,999, and 57.4% reported an annual household income of

\$75,000 and greater each year. Additionally, the majority of mothers had some college education or a college degree (74.7%), with some having a professional degree (17.3%), and fewer having a high school or vocational degree (8.0%). While the mothers all stated being Christian, the denominations included Catholic (25.3%), Protestant (34.7%), and other unlisted denominations (37.3%).

Procedure

Mothers were recruited through several social media sites, autism outreach centers, and personal connections. After expressing interest in the study and providing informed consent, mothers were emailed a unique link to the online survey. Following completion of the survey, mothers were provided a \$15 gift card to a national retailer.

Measures

Religiosity. To measure the various aspects of religion and spirituality a multidimensional scale developed by the Fetzer Institute (1999) was used. The different subscales include spirituality, private religious practice, organized religious practice, and religious support.

The Daily Spiritual Experience Scale (DSE) was used to measure a mother's relationship with and closeness to God. Participants were asked to judge the extent of the spiritual experiences they typically had. This six item scale used a 6-point Likert-type scale (1= many times a day to 6= never or almost never). Sample items included, "I feel God's presence" and "I feel God's love for me, directly or through others." All scores were reverse coded and summed to represent the mother's total spirituality. Possible scores for this scale ranged from 6 to 36. Cronbach's alpha in the current study was .90, indicating high internal consistency for this subscale.

To measure organized religious activity, another subscale was used that measured the time mothers spent participating in public religious activities, such as attending Bible studies and volunteering. The mothers were asked to rate the amount of times they attended religious services and participated in activities at a place of worship. This two-item scale used a 6-point Likert-type scale (1= several times a week to 6= never). All scores were reverse coded and summed to indicate total investment in organized religious activities. Possible scores for this scale ranged from 2 to 36. Cronbach's alpha in the current study was .76.

A mother's devotion to informal practices outside of a place of worship was measured by the Private Religious Practice subscale. Mothers rated the amount of time spent praying and reading religious text on an 8-point Likert-type scale (1= several times a week to 8= never) for the five-item scale. All scores were reverse coded and summed to find the total amount of time the mother spent engaging in religious activities outside of the church. Possible scores for this scale ranged from 2 to 64. Cronbach's alpha in the current study was .79.

A congregation's support, or lack of support, for the mothers was measured in the Religious Support subscale. Mothers were asked to rate how often they felt supported by fellow members and staff at their church. This four-item scale used a 4 point Likert-type scale (1= a great deal to 4= none). This scale was divided into subscales, negative interaction and anticipated support, to distinguish the type of interaction the mothers experienced. Sample items included, "How often are the people in your congregation critical of you and the things you do" within the negative interaction subscale, and "If you were faced with a difficult situation, how much comfort would the people in your

congregation be willing to give you” within the anticipated support subscale. The two subscales were reverse coded and separately summed. Cronbach’s alpha was .55 for negative interactions, and .92 for anticipated support.

The Brief Religious Coping scale (RCOPE; Pargament, 2000) was used to measure religious coping, using a 14- item scale, which was divided into two subscales, negative religious coping and positive religious coping, with seven items each. Participants were asked the extent to which they engaged in certain religious actions during a problematic time. This scale used a 4-point Likert-type scale (1= not at all to 4= a great deal). Sample negative religious coping items included: “Wondered what I did for God to punish me,” whereas positive religious coping items included, “Sought God’s love and care.” All scores were reversed coded and summed for a total sum of negative religious coping and positive religious coping. Possible scores ranged from 7 to 28 within each subscale. Cronbach’s alphas in the current study were .91 for positive religious coping and .85 for negative religious coping, indicating both subscales had good internal consistency.

Maternal Child Perceptions. The Kansas Inventory of Parental Perceptions (KIPP; Behr, Murphy, & Summers, 1992) was used to measure how the mothers perceived their child with ASD. Specifically, the strength in family closeness subscale was used for this study. Participants were asked to rate how their child with ASD affected the family system and the mothers’ own life perception. The seven-item scale used a 4-point Likert –type scale (1= strongly disagree to 4= strongly agree). Sample items included, “ Because of my child, our family has become closer” and “ Because of my child, I am grateful each day.” An average score was calculated to represent family

closeness. Possible scores ranged from 1 to 4. Cronbach's alpha was .83, indicating high question reliability.

Maternal Autism Symptomatology. The Broad Autism Phenotype Questionnaire (BAPQ; Hurley, Losh, Parlier, Reznick, & Piven, 2007) measured mothers' autism symptoms. Mothers were asked to rate how often certain situations and statements related to their lifestyle and personality. Sample questions included, "I enjoy being in social situations" and "I like to closely follow a routine while working." The 36 item scale used a 6-point Likert-type scale (1= very rarely to 6= very often). Fifteen items were reverse coded, and the items were averaged. The higher the mother's score, the more ASD related characteristics, or BAP, she possessed. Possible scores ranged from 1 to 6. Cronbach's alpha was .59.

Marital Satisfaction. The Couples Satisfaction Index (CSI; Funk & Rogge, 2007) measured the total satisfaction the mother felt within her marriage or current relationship. Mothers rated how true certain relationship related questions were in their relationship. The 32-item scale used a 6-point Likert-type scale (0= not at all true to 5= completely true). Sample questions included, "Our relationship is strong" and "I really feel like part of a team with my partner." Six items were reverse coded so that the higher the score, the more satisfied the mother was. Possible scores ranged from 32 to 192. Cronbach's alpha was .88, which indicated high internal reliability.

Anxiety. The State Trait Anxiety Index (STAI; Spielberg, Gorsuch, Lushene, Vagg, & Jacobs, 1983) is a 40 item scaled used to measure a mother's anxiety. Mothers rated how they felt at that specific moment on a 4-point Likert-type scale (1= not at all to 4= very much so). Sample items included: "I feel tense", "I feel secure", and "I am

worried". Ten items were reversed coded so that a high score indicated high levels of overall stress. The scale was split into two subscales, state anxiety and trait anxiety. The state anxiety subscale focused on anxious feelings at that current time, whereas trait anxiety looked at anxiety as a consistent personality trait. For this study, we used the State Anxiety subscale, which had a Cronbach's Alpha of .93, indicating high internal consistency.

Results

Data analysis consisted of several steps. First, descriptive analyses were conducted on each variable used within the study, including spirituality, organized religious practice, private religious practice, positive and negative religious coping, anticipated religious support, negative religious interactions, maternal ASD symptomatology, maternal child perceptions, maternal anxiety, and marital satisfaction. Secondly, I conducted analyses to determine whether any potential covariates needed to be accounted for in further analyses. Third, separate mediation models were tested to examine the relationship between religiosity and maternal anxiety, with marital satisfaction and child perception as mediators. Lastly, a simple linear regression was used to examine the relationship between maternal ASD symptomatology and negative religious interactions.

Descriptive Statistics

To examine the normal distribution of the data, all variables were tested for skewness and kurtosis. The data were found to be normally distributed. For analyses involving the BAPQ, the sample size was reduced because 19 mothers did not meet the

cut-off for elevated BAP symptoms. Table 1 presents the means and standard deviations for all study variables.

Covariates

To determine whether the inclusion of covariates was necessary, a one-way analysis of variance (ANOVA) was conducted for the categorical demographic variables (child gender, annual income, parent and child ethnicity, and parent education). A significant difference for child gender was found for marital satisfaction, $F(1, 72) = 7.46$, $p = .008$. Mothers of females ($M = 77.38$, $SD = 8.66$) reported lower marital satisfaction compared to mothers of males ($M = 96.83$, $SD = 2.27$). Correlations were computed for continuous variables (parent age and child age). A significant correlation was found between the mother's age and her perception of her child, such that older mothers had a more negative view of their child, $r = -.25$, $N = 75$, $p = .03$. Therefore, any analyses involving marital satisfaction included child gender as a covariate and analyses involving maternal child perceptions included maternal age as a covariate.

Marital Satisfaction, Religiosity, and Anxiety

A series of separate mediation models were tested using PROCESS in SPSS (Preacher & Hayes, 2008). The religiosity variables (daily spiritual experience, private religious practice, organized religious practice, positive and negative religious coping, anticipated religious support, and negative religious interactions) were entered separately as the independent variable, maternal anxiety was the dependent variable, and marital satisfaction served as the mediator. I controlled for child gender when conducting the mediations. As shown in Table 2, a significant mediation effect was found for daily spiritual experience, private religious practice, organized religious practice, and

anticipated religious support. More specifically, a mother's daily spiritual experience, private religious practice, organized religious practice, and anticipated religious support predicted increased marital satisfaction which in turn predicted lower levels of maternal anxiety. These were considered full mediation because of the lack of significance of the direct effect between the religiosity variables and maternal anxiety. Although the direct relationship between daily spiritual experience, private religious practice, organized religious practice, and anticipated religious support and maternal anxiety was not significant, when marital satisfaction was added as a mediator, the significance decreased. Lastly, the mediation models that included positive religious coping, negative religious coping, and negative religious interactions were non-significant.

Child Perceptions, Religiosity, and Anxiety

A series of separate mediation models were tested using PROCESS in SPSS (Preacher and Hayes, 2008). The religiosity variables (daily spiritual experience, private religious practice, organized religious practice, positive and negative religious coping, anticipated religious support, and negative religious interactions) were entered separately as the independent variable, maternal anxiety was the dependent variable, and parental child perception served as the mediator. The mother's age was controlled for when conducting the mediations. As shown in Table 3, a significant mediation effect was found for daily spiritual experience, organized religious practice, positive religious coping, and anticipated religious support. More specifically, a mother's daily spiritual experience, organized religious practice, positive religious coping, and anticipated religious support predicted increased parental child perception which in turn predicted lower levels of maternal anxiety. These were considered full mediation effects because of the lack of

significance of the direct connection between the religiosity variables and maternal anxiety. Although the relationship between daily spiritual experience, organized religious practice, positive religious coping, and anticipated religious support and maternal anxiety was not significant, when marital satisfaction was added as a mediator, the significance decreased. The mediation models were non-significant for private religious practice, negative religious coping, and negative religious interactions.

Maternal Autism Symptomatology and Religiosity

A simple linear regression was used to examine the relationship between maternal BAP symptoms and negative religious interactions. There was a significant positive relationship between maternal ASD symptomatology and negative religious interaction. Specifically, the more BAP symptoms a mother showed, the more negative religious interactions she experienced, $b = .50$ ($SE = .20$), $t = 2.48$, $p = .02$, $R^2 = .08$.

Table 1: *Mean and Standard Deviations for all variables*

Variables	<i>N</i>	<i>M</i>	<i>SD</i>
Daily Spiritual Experience	75	26.40	6.38
Private Religious Practice	75	23.84	7.77
Organized Religious Practice	75	6.93	2.58
Positive Religious Coping	75	19.80	5.49
Negative Religious Coping	75	10.04	4.06
Anticipated Religious Support	74	5.35	2.00
Negative Religious Interactions	74	3.09	1.32
Maternal ASD Symptomology	75	.25	.44
Marital Satisfaction	73	94.70	19.85
Parental Child Perception	75	3.45	.49
Anxiety	75	41.59	11.18

Table 2: *Results from models testing whether marital satisfaction mediated the relationship between religiosity and maternal anxiety*

Religiosity	A Path	B Path	C' Path	C Path	UL,LL	R ²
Daily Spiritual Experience	.78 (.35)*	-.15 (.07)*	-.17 (.20)	-.29 (.20)	-.33, -.007	.11
Private Religious Practice	.79 (.28)**	-.17 (.07)*	-.04 (.17)	-.10 (.17)	-.37, -.03	.11
Organized Religious Practice	2.11 (.83)**	-.15 (.07)*	-.31 (.50)	-.64 (.49)	-.82, -.03	.11
Positive Religious Coping	.40 (.42)	-.17 (.07)**	.10 (.23)	.03 (.24)	-.28, .07	.11
Negative Religious Coping	-1.07 (.58)	-.15 (.07)*	.34 (.33)	.50 (.33)	.01, .50	.12
Anticipated Religious Support	2.71 (1.10)*	-.17 (.07)*	.49 (.64)	.04 (.64)	-1.21, -.05	.09
Negative Religious Interactions	-.24 (1.76)	-1.50 (.06)*	.78(.94)	.82(.97)	-.63, .73	.09

Table 3: *Results from models testing whether parental child perception mediated the relationship between religiosity and maternal anxiety*

Religiosity	A Path	B Path	C' Path	C Path	UL,LL	R ²
Daily Spiritual Experience	.03 (.01)***	-6.10 (2.88)*	-.10 (.22)	-.31 (.20)	-.45, -.01	.12
Private Religious Practice	.01 (.01)	-7.5 (2.7)**	-.0005 (.17)	-.09 (.17)	-.25, -.0008	.10
Organized Religious Practice	.05 (.02)**	-6.92 (2.75)**	-.39 (.51)	-.76 (.50)	-1.11, -.05	.11
Positive Religious Coping	.02 (.01)*	-8.06 (2.73)**	.18 (.24)	-.004 (.24)	-.45, -.05	.11
Negative Religious Coping	-.02 (.01)	-6.60 (2.61)**	.62 (.31)*	.76 (.31)*	-.01, .55	.15
Anticipated Religious Support	.08 (.03)**	-7.72 (2.70)**	.26 (.65)	-.32(.65)	-1.35, -.16	.12
Negative Religious Interactions	.07 (.04)	-8.29 (2.54)**	1.83 (.93)*	1.29 (.97)	-1.69, -.02	.15

Discussion

Research suggests that religiosity and spirituality are complex constructs that can positively, and negatively, affect a person's life (Koenig, Pargament, & Perez, 2000). The same findings can be applied to the stressful demographic of mothers of a child with ASD (Tarakeshwar & Pargament, 2001). To further the research already conducted, the present study focused on several aspects of religiosity including daily spiritual experiences, private religious practice, organized religious practice, positive and negative religious coping, anticipated religious support, and negative religious interactions, and the impact it has on a mother's psychological well-being, namely anxiety. My primary goal was to determine the mechanisms by which religiosity affects maternal anxiety, focusing on marital satisfaction and parental child perceptions as possible mediators of the relationship. Results indicated that an increase in daily spiritual experience, private religious practice, organized religious practice, and anticipated religious support led to increased marital satisfaction and decreased anxiety. Additionally, a mother's daily spiritual experience, organized religious practice, positive religious coping, and anticipated religious support increased parents' positive child perceptions, which in turn decreased anxiety. My secondary goal focused on whether a mother's BAP symptomatology increased her negative religious interactions. Results showed that as a mother's BAP symptomatology increased, she experienced more negative religious interactions.

The results are generally consistent with previous studies on religiosity and maternal well-being, such that religiosity is associated with less negative outcomes (Ekas et al., 2009). While the current study did not show a direct impact of religiosity on

maternal anxiety, as in the previous studies, it did indicate a pathway in which religiosity decreases anxiety through increased marital satisfaction and positive child perceptions. With respect to marital satisfaction, it seems as if the Christian view on the sanctity of marriage could elevated a couple's regard for the marital relationship (Stafford, David, & McPherson, 2014). By having a supportive spouse, mothers can give more time to focus on their child, rather than their unstable marriage, and are given an extra outlet to cope with their anxiety. A speculative suggestion for the findings regarding positive child perceptions may be that an increase in closeness with God could results in a more positive view of a child with ASD through a trust in God's plan as well as his love for their child. This is supported by previous research that suggested positive religious coping leads to stress related growth as well as better child perception (Tarakeshwar & Pargament, 2001). While Tarakeshwar and Pargament (2001) only focused on the religious coping scale, the current study included additional measures to gain a fuller view of the mother's religiosity. Mothers who are more religious, and utilize positive religious coping, may view their child as a gift rather than a punishment, thus decreasing their anxiety. Through viewing their child more positively, it seems as if mothers develop a more positive outlook on life and stress less.

Unique to this study, organized religious practice predicted both an increase in marital satisfaction as well as parental child perception, leading to a decrease in maternal anxiety. While previous studies found that increased levels of organized religious activities led to increased stress for mothers of a child with ASD (Ekas et al., 2009), the present study found the opposite. The difference could be related to the mother's motivation for participating in organized religious practice. Individuals who participated

in religious activities because of church expectations reported more negative emotions than those who completed religious activities to gain a better relationship with God (Martos, Sallay, & Kézdy, 2013). Within the current study, organized religious activities could have led to an increased sense of closeness to God thus decreasing anxiety. Within the participants of this study, mothers also revealed higher levels of anticipated religious support than negative religious interactions. This may indicate a growth in the church's assistance for families' of children with ASD. While previous interview-based studies found the church to not be supportive (Tarakeshwar & Pargament, 2001), the mothers in the current study reported higher levels of anticipated religious support. With the prevalence and increased education on ASD, churches may be more willing and able to assist families of children with ASD. The supportive environment provided by churches could lead mothers to feel comfortable and supported engaging in organized religious activities.

Within church support, anticipated religious support was related to both increased maternal satisfaction and positive child perceptions. This religious based social support mimics the results of previous research on how social support decreases anxiety within mothers of children with ASD (Bishop et al., 2007). It seems as if mothers who feel supported by their church feel more welcomed to engage in religious worship and feel assisted in caring for their child with ASD. On the other hand, mothers who showed more BAP symptoms experienced more negative church interactions. One pronounced characteristic of ASD symptoms is difficulty in social settings. Mothers who show higher ASD symptoms may have a difficult time connecting socially with members of the church, thus leading to perceived negative interactions. Overall, through increasing one's

spirituality in a variety of ways, privately and publicly, it seems as if mothers can increase her marital relationship, perception of her child, and her well-being.

Interestingly, neither of the negative aspects of religiosity studied, negative religious coping and negative religious interactions, had a significant effect on marital satisfaction or maternal child perception. While one would assume that increased levels of negative religious aspects would lead to a decrease in marital satisfaction and maternal child perception and thus an increase in anxiety, the assumption was not supported by the data. This continues the paradox found within studying religiosity. While positive religious variables led to better outcomes, negative religious variables did not lead to poorer outcomes within mothers of children with ASD.

Limitations and Future Research

The current had several limitations that warrant discussion. Because religion and spirituality are both highly internalized and subjective measurements, the data has some room for error. Specifically, it was difficult finding ways in which to measure and address each aspect of religiosity. Furthermore, definitions for religion and spirituality can differ among individuals, thus skewing the data collected. Because the current study consisted of mainly upper middle-class Christian Caucasian mothers, the results are limited in generalizability.

The findings and limitations within the current study can lead to ideas for future studies. One aspect of the current study that could be expanded on is the religious identification of the sample. Further studies could be conducted that include not only Christians, but also mothers who identify as Muslim or Jewish. This would allow the researcher to further compare spirituality as experienced through Christianity against

spirituality experienced in other religions. Additional studies could include a longitudinal aspect to study the lasting impact of religious activity. In all, there is much room for growth of research about mothers of children with ASD and religiosity.

Conclusion

The current study shows how religiosity can impact a mother's well-being through the different avenues of marital satisfaction and parental child perception. Because of the benefits religiosity can offer a mother of a child with ASD, it should be considered as a potential addition to intervention programs. Additionally, churches are encouraged to create a more supportive environment for parents and children in the growing ASD population. This study shows that a supportive environment can positively impact maternal functioning, albeit in an indirect manner. Overall, religiosity can be a resource for mothers to utilize to cope with the day-to-day stress of parenting a child with ASD, and should be expanded on in research and intervention.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Ault, M. J., Collins, B. C., & Carter, E. W. (2013). Congregational participation and supports for children and adults with disabilities: Parent perceptions. *Intellectual And Developmental Disabilities, 51*(1), 48-61. doi:10.1352/1934-9556-51.01.048
- Baker, J. K., Seltzer, M. M., & Greenberg, J. S. (2011). Longitudinal effects of adaptability on behavior problems and maternal depression in families of adolescents with autism. *Journal of Family Psychology, 25*(4), 601-609. doi:10.1037/a0024409
- Behr, S. K., Murphy, D. L., & Summers, J. A. (1992). Kansas inventory of parental perceptions. *Kansas University Affiliated Programs and Beach Center on Disability*
- Benson, P. R., & Karlof, K. L. (2009). Anger, stress proliferation, and depressed mood among parents of children with ASD: A longitudinal replication. *Journal of Autism and Developmental Disorders, 39*(2), 350-362. doi:10.1007/s10803-008-0632-0
- Bishop, S. L., Richler, J., Cain, A. C., & Lord, C. (2007). Predictors of perceived negative impact in mothers of children with autism spectrum disorder. *American Journal On Mental Retardation, 112*(6), 450-461.
- Bitsika, V., & Sharpley, C. F. (2004). Stress, Anxiety and Depression Among Parents of Children With Autism Spectrum Disorder. *Australian Journal of Guidance and Counselling, 14*(2), 151-161

- Bitsika, V., Sharpley, C. F., & Bell, R. (2013). The buffering effect of resilience upon stress, anxiety and depression in parents of a child with an autism spectrum disorder. *Journal of Developmental and Physical Disabilities, 25*(5), 533-543. doi:10.1007/s10882-013-9333-5
- Boyd, B. A. (2002). Examining the relationship between stress and lack of social support in mothers of children with autism. *Focus on Autism and Other Developmental Disabilities, 17*(4), 208-215. doi:10.1177/10883576020170040301
- Brown, E., Orbuch, T. L., & Bauermeister, J. A. (2008). Religiosity and marital stability among Black American and White American couples. *Family Relations: An Interdisciplinary Journal of Applied Family Studies, 57*(2), 186-197. doi:10.1111/j.1741-3729.2008.00493.x
- Centers for Disease Control and Prevention. (2014). Prevalence of autism spectrum disorder among children aged 8 years. *Centers for Disease Control and Prevention, 63*(SS02), 1-21
- Coulthard, P., & Fitzgerald, M. (1999). In God we trust? Organised religion and personal beliefs as resources and coping strategies, and their implications for health in parents with a child on the autistic spectrum. *Mental Health, Religion & Culture, 2*(1), 19-33. doi:10.1080/13674679908406329
- Dabrowska, A., & Pisula, E. (2010). Parenting stress and coping styles in mothers and fathers of pre-school children with autism and Down syndrome. *Journal of Intellectual Disability Research, 54*(3), 266–280. doi:10.1111/j.1365-2788.2010.01258
- Ekas, N. V., Lickenbrock, D. M., & Whitman, T. L. (2010). Optimism, social support,

and well-being in mothers of children with autism spectrum disorder. *Journal Of Autism And Developmental Disorders*, 40(10), 1274-1284. doi:10.1007/s10803-010-0986-y

Ekas, N., & Whitman, T. L. (2010). Autism symptom topography and maternal socioemotional functioning. *American Journal On Intellectual And Developmental Disabilities*, 115(3), 234-249. doi:10.1352/1944-7558-115.3.234

Ekas, N. V., Whitman, T. L., & Shivers, C. (2009). Religiosity, spirituality, and socioemotional functioning in mothers of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 39(5), 706-719. doi:10.1007/s10803-008-0673-4

Fletcher, P. C., Markoulakis, R., & Bryden, P. J. (2012). The costs of caring for a child with an autism spectrum disorder. *Issues in Comprehensive Pediatric Nursing*, 35, 45–69.

Foody, C., James, J. E., & Leader, G. (2014). Parenting stress, salivary biomarkers, and ambulatory blood pressure: A comparison between mothers and fathers of children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, doi:10.1007/s10803-014-2263-y

Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, 21, 572-583.

Graham, S., Furr, S., Flowers, C., & Burke, M. T. (2001). Religion and spirituality in coping with stress. *Counseling and Values*, 46(1), 2-13. doi:10.1002/j.2161-007X.2001.tb00202

Hartley, S. L., Barker, E. T., Baker, J. K., Seltzer, M. M., & Greenberg, J. S. (2012).

Marital satisfaction and life circumstances of grown children with autism across 7 years. *Journal of Family Psychology, 26*(5), 688-697. doi:10.1037/a0029354

Hartley, S.L., Barker, E.T., Seltzer, M.M., Greenberg, J.S., & Floyd, F.J. (2011). Marital

satisfaction and parenting experiences of mothers and fathers of adolescents and adults with autism. *American Journal of Intellectual and Developmental*

Disabilities, 116(1), 81-95. doi:10.1352/1944-7558-116.1.81

Hastings, R. P., Kovshoff, H., Ward, N. J., Degli Espinosa, F., Brown, T., & Remington,

B. (2005). Systems Analysis of Stress and Positive Perceptions in Mothers and Fathers of Pre-School Children with Autism. *Journal of Autism and*

Developmental Disorders, 35(5), 635-644. doi:10.1007/s10803-005-0007-8

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable

mediation, moderation, and conditional process modeling. Manuscript submitted for publication. Retrieved from <http://www.afhayes.com/public/process2012.pdf>

Higgins, D. J., Bailey, S. R., & Pearce, J. C. (2005). Factors associated with functioning

style and coping strategies of families with a child with an autism spectrum disorder. *Autism, 9*(2), 125-137. doi:10.1177/1362361305051403

Hill, P. C., & Pargament, K. I. (2008). Advances in the conceptualization and

measurement of religion and spirituality: Implications for physical and mental health research. *Psychology of Religion and Spirituality, 5*(1), 3-17.

doi:10.1037/1941-1022.S.1.3

Hock, R. M., Timm, T. M., & Ramisch, J. L. (2012). Parenting children with autism

spectrum disorders: A crucible for couple relationships. *Child and Family Social*

Work, 17(4), 406-415. doi:10.1111/j.1365-2206.2011.00794.x

Hurley R. S. E., Losh M., Parlier M., Reznick J. S., & Piven J. The broad autism phenotype questionnaire. *Journal of Autism and Developmental Disorders*, 37, 1679–1690

Ivtzan, I., Chan, C. L., Gardner, H. E., & Prashar, K. (2013). Linking religion and spirituality with psychological well-being: Examining self-actualisation, meaning in life, and personal growth initiative. *Journal of Religion and Health*, 52(3), 915-929. doi:10.1007/s10943-011-9540-2

John E. Fetzer Institute. (1999). Multidimensional measurement of religiousness/spirituality for use in health research. Kalamazoo, MI.

Johnson, N. L., & Simpson, P. M. (2013). Lack of father involvement in research on children with Autism Spectrum Disorder: Maternal parenting stress and family functioning. *Issues in Mental Health Nursing*, 34(4), 220-228. doi:10.3109/01612840.2012.745177

Jones, L., Hastings, R. P., Totsika, V., Keane, L., & Rhule, N. (2014). Child behavior problems and parental well-being in families of children with autism: The mediating role of mindfulness and acceptance. *American Journal on Intellectual and Developmental Disabilities*, 119(2), 171-185. doi:10.1352/1944-7558-119.2.171

Kersh, J., Hedvat, T. T., Hauser-Cram, P., & Warfield, M. E. (2006). The contribution of marital quality to the well-being of parents of children with developmental disabilities. *Journal of Intellectual Disability Research*, 50, 883–893

Lamis, D. A., Wilson, C. K., Tarantino, N., Lansford, J. E., & Kaslow, N. J. (2014).

Neighborhood disorder, spiritual well-being, and parenting stress in African American women. *Journal of Family Psychology*, 28, 790–799.

<http://dx.doi.org/10.1037/fam0000033>

Lawson, R. A., Papadakis, A. A., Higginson, C. I., Barnett, J. E., Wills, M. C., Strang, J. F., & ... Kenworthy, L. (2014). Everyday executive function impairments predict comorbid psychopathology in autism spectrum and attention deficit hyperactivity disorders. *Neuropsychology*, doi:10.1037/neu0000145

Lee, G. K. (2009). Parents of children with high functioning autism: How well do they cope and adjust? *Journal of Developmental and Physical Disabilities*, 21, 93–114.

Lee, S. A., Roberts, L. B., & Gibbons, J. A. (2013). When religion makes grief worse: Negative religious coping as associated with maladaptive emotional responding patterns. *Mental Health, Religion & Culture*, 16(3), 291-305.
doi:10.1080/13674676.2012.659242

Lickenbrock, D. M., Ekas, N. V., & Whitman, T. L. (2011). Feeling good, feeling bad: Influences of maternal perceptions of the child and marital adjustment on well-being in mothers of children with an autism spectrum disorder. *Journal of Autism And Developmental Disorders*, 41(7), 848-858. doi:10.1007/s10803-010-1105-9

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: implications for interventions and social policies. *Development and Psychopathology*, 12, 857–885.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological methods*, 7(1), 83.

Martos, T., Sallay, V., & Kézdy, A. (2013). Everyday goals, religious motivations, and

- well-being: The mediating role of emotions. *Studia Psychologica*, 55(3), 221-228.
- Natsubori, S. (2001). Acceptance of their children's disability by mothers of preschool children with autism. *Japanese Journal of Special Education*, 39(3), 11-22
- Pargament, K. I. (2002). The bitter and the sweet: An evaluation of the costs and benefits of religiousness. *Psychological Inquiry*, 13(3), 168-181.
doi:10.1207/S15327965PLI1303_02
- Pargament, K. I., Koenig, H. G., & Perez, L. M. (2000). The many methods of religious coping: Development and initial validation of the RCOPE. *Journal of Clinical Psychology*, 56(4), 519-543. doi:10.1002
- Patrick, J. H., & Kinney, J. M. (2003). Why Believe? The Effects of Religious Beliefs on Emotional Well Being. *Journal Of Religious Gerontology*, 14(2-3), 153-170.
doi:10.1300/J078v14n02_05
- Piedmont, R. L. (2004). Spiritual transcendence as a predictor of psychosocial outcome from an outpatient substance abuse program. *Psychology of Addictive Behaviours*, 18, 213-222.
- Poston, D. J., & Turnbull, A. P. (2004). Role of spirituality and religion in family quality of life for families of children with disabilities. *Education And Training In Developmental Disabilities*, 39(2), 95-108.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879-891

- Ramisch, J. L., Onaga, E., & Oh, S. M. (2014). Keeping a sound marriage: How couples with children with autism spectrum disorders maintain their marriages. *Journal of Child and Family Studies*, 23(6), 975-988. doi:10.1007/s10826-013-9753-y
- Rivers, J. W., & Stoneman, Z. (2003). Sibling Relationships When a Child Has Autism: Marital Stress and Support Coping. *Journal of Autism and Developmental Disorders*, 33(4), 383-394. doi:10.1023/A:1025006727395
- Sabey, A. K., Rauer, A. J., & Jensen, J. F. (2014). Compassionate love as a mechanism linking sacred qualities of marriage to older couples' marital satisfaction. *Journal of Family Psychology*, 28(5), 594-603. doi:10.1037/a0036991
- Schramm, D. G., Marshall, J. P., Harris, V. W., & Lee, T. R. (2012). Religiosity, homogamy, and marital adjustment: An examination of newlyweds in first marriages and remarriages. *Journal of Family Issues*, 33(2), 246-268. doi:10.1177/0192513X11420370
- Sheldrake, P. (2007). *A brief history of spirituality*. Oxford: Blackwell Publishin Ltd.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Stafford, L., David, P., & McPherson, S. (2014). Sanctity of marriage and marital quality. *Journal Of Social And Personal Relationships*, 31(1), 54-70.
- Tarakeshwar, N., & Pargament, K. I. (2001). Religious coping in families of children with autism. *Focus on Autism and Other Developmental Disabilities*, 16(4), 247-260. doi: /10.1177/108835760101600408

Weaver, A. J., Pargament, K. I., Flannely, K. J., & Oppenheimer, J. E. (2006). Trends in the scientific study of religion, spirituality, and health. *Journal of Religion and Health, 45(2)* 208-214