

RELIGIOUS COPING BY MOTHERS OF CHILDREN WITH AUTISM

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## TABLE OF CONTENTS

List of Illustrations and Tables .....	iv
List of Abbreviations .....	v
Abstract .....	vi
Introduction.....	1
Method .....	36
Results.....	46
Discussion.....	71
References.....	80
Appendix A.....	86
Appendix B .....	130
Curriculum Vitae .....	138

## LIST OF ILLUSTRATIONS AND TABLES

### Introduction

Table 1: RCOPE Subscales.....	20
Table 2: The Brief RCOPE.....	21
Figure 1: Conceptual Model of Religion, Stress, and Well-being.....	33

### Method

Table 3: Sample Characteristics.....	37
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### Results

Table 4: Means and Standard Deviations .....	48
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### Discussion

Figure 2: Model Illustrating the Results .....	72
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### Appendix A

Table 5: Zero-Order Correlations .....	86
Table 6: Stress and Psychological Well-Being.....	94
Table 7: Religion, Social Support, and Well-Being .....	96
Table 8: Moderation Analyses.....	107

## **LIST OF ABBREVIATIONS**

1. APA-American Psychiatric Association
2. ASD-Autism Spectrum Disorder
3. CDC-Centers for Disease Control and Prevention

## ABSTRACT

Raising a child with autism can be a great source of stress and may be linked to parents' well-being and psychological distress. As such, it is important to understand the coping strategies commonly used by parents in order to offer the necessary support to improve quality of life. Considering the prevalence of religion in the United States, religious coping strategies specifically can serve as a helpful resource grounded in an important aspect of life for many people. The present study examined the role of religious coping specifically as a predictor of parent well-being. Forty-one mothers of children with autism completed measures of parental stress, psychological well-being, and religion and spirituality. Demographic information regarding the mothers and their children with autism was also collected. Hierarchical regression analyses revealed that although stress significantly predicted parent well-being, religion and spirituality did not demonstrate any associations with well-being. Furthermore, religious coping did not moderate the relationship between stress and psychological well-being. Given that the sample did not appear to be heavily involved in organized religion, future research should explicitly compare associations between religious coping and well-being among highly religious and less religious parents of children with autism.

*Keywords:* autism, mothers, coping, religious coping

## INTRODUCTION

The Centers for Disease Control and Prevention (CDC) defines developmental disabilities as “a group of conditions due to impairment in physical, learning, language, or behavior areas” (CDC, 2015). In the United States, these conditions affect sizable percentages of children and their families, and these numbers are only getting larger. Specifically, research examining children between the ages of 3 and 17 in the United States has indicated that the prevalence rate of any developmental disability, including stuttering, blindness, cerebral palsy, autism, hearing loss, learning and intellectual disabilities, ADHD, and seizures, increased from 12.84% from 1997-1999 to 15.04% from 2006-2008 (Boyle et al., 2011).

Among the broad category of developmental disabilities, autism spectrum disorder (ASD) has emerged as particularly prevalent in the United States, with a 2012 study of 8-year-old children in 11 locations by the CDC estimating that as many as one in 68 children may be diagnosed with autism, with some prevalence estimates as high as 2.5% (Christensen et al., 2016). Although Prior (2003) notes that this high prevalence may represent changes in the scientific understanding of autism and in diagnostic practices as opposed to an actual increase in the presence of the condition, a child’s autism diagnosis nonetheless poses a significant challenge to parents, as the disorder is characterized by the presence of a number of challenging symptoms, including repetitive behavior and communication and social deficits, and is often associated with disruptive and self-injurious behaviors (American Psychiatric Association [APA], 2013). As such, it is important to understand the effect of raising a child with autism on the psychological

well-being of parents, as well as how parents cope with the stressors that might be involved.

Among the possible coping strategies used by parents of children with autism, religious coping may be especially salient given the role of religion in shaping individual worldviews. Considering that 76.5% of American adults surveyed in 2014 reported some religious affiliation (Pew Research Center, 2015), religious coping strategies likely play a role in how some parents manage the stress associated with raising a child with autism. Yet, relatively little research to date has examined this important topic. The proposed study will address this gap in the literature by examining the role of multiple dimensions of religiosity (e.g., positive and negative religious coping strategies, religious social support, religious identity) as potential moderators of the relation between parental stress and psychological well-being. Considering that the prevalence of families who must cope with having a child with special needs is likely to continue to increase, it is important to illuminate parents' experiences with these challenging circumstances and identify opportunities for researchers and clinicians to intervene and provide support for not only children with autism, but for their caregivers as well.

### **Challenges Faced by Parents of Children with Autism**

Autism today is understood as existing on a spectrum, meaning that different individuals with a diagnosis of ASD may demonstrate markedly different levels of impairment related to social challenges and the presence of repetitive behavior (APA, 2013). Currently, the APA (2013) has identified three levels of impairment in ASD, with individuals below level 1 exhibiting the least impairment and requiring less support, and individuals at level 3 experiencing the most severe impairment and requiring a high



degree of support. Notably, in addition to challenges associated with repetitive behaviors and social impairment, language difficulties and intellectual disabilities may also occur among individuals with autism.

Given probable variations in the demands experienced by parents of children with varying levels of ASD, diagnostic severity likely holds important implications for parent well-being. For example, Bromley, Hare, Davison, and Emerson (2004) studied several possible contributors to the psychological distress of 68 mothers of five to 18-year-old children with autism, including unmet needs, family support, child emotional disturbance, child abilities, and use of services. Greater mental health difficulties among parents were positively associated with child emotional disturbance and self-absorption, suggesting that more severe symptoms among children with autism can be related to parents' well-being.

There are multiple forces involved in explaining why parents' well-being might be threatened by their child's diagnosis. According to literature reviewed by Serrata (2012), parents of children with autism face stressors associated with several aspects of the child's disorder, such as changes in the marital relationship and family life; the child's symptoms, including sleep difficulties, behavior problems, and poor social skills; and financial challenges. Each of these stressors may be associated with reduced psychological well-being among parents. Interestingly, some research indicates that parents of children with autism demonstrate greater distress than parents of children with other developmental disabilities, perhaps due to the severity and circumstances of the child's condition (Dumas, Wolf, Fisman, & Culligan, 1991). Specifically, Dumas et al. (1991) compared depression and stress among parents of typically developing children

and children with Down syndrome, autism, or a behavior disorder. Thirty children who were approximately 7-9 years of age represented each disorder examined, and 60 typically developing children were included. Their results suggested that parents of children with autism or a behavior disorder reported greater stress than parents of typically developing children or children with Down syndrome, a finding Dumas and colleagues note could be due to potential differences in symptoms between children with autism or a behavior disorder and children with Down syndrome. Given that parents of children with a behavior disorder also reported elevated stress, distinct behavioral challenges may distinguish parenting a child with autism or a behavior disorder from parenting a child with Down syndrome. Furthermore, concerns about stigma related to child problem behavior may also be salient to parents of children with a behavior disorder or autism (Dempster, Wildman, & Keating, 2013). Notably, Rodrigue, Morgan, and Geffken (1991) reported that children with autism displayed more seriously impaired social skills than children with Down syndrome, who were actually similar to typically developing children in social functioning. These social challenges offer an explanation for uniquely difficult parent-child interactions when raising a child with autism as opposed to parenting a child with Down syndrome. A lack of social skills could also compromise parental efforts to manage a child's behavior using typical forms of communication. Collectively, these findings demonstrate the importance of examining well-being among parents of children with autism specifically given the unique characteristics of this condition that may hold important implications for parenting stress.

Despite these findings, not all studies are uniform in detecting inverse associations between autism severity and parent outcomes. Doron and Sharabany (2013)

examined the marriages of 33 couples who had children with autism between the ages of 4 and 17 and found that the severity of a child's autism symptoms was not related to the closeness of the parents' marriage or parental emotional well-being. Still, the age of the child with autism was inversely associated with each of these outcome variables, a finding Doron and Sharabany (2013) attribute to increased stress associated with the parents' concerns over their child's future and changes in the child's condition over time. Although one may expect to observe greater parental stress as the age of a child with autism increases due to both the concerns discussed by Doron and Sharabany (2013) and possible increases in the difficulty of managing the symptoms and behaviors of an older child, other research suggests that autism severity actually decreases in certain social and behavioral domains as a child's age increases (Mayes & Calhoun, 2011). Given that the severity measure used by Mayes and Calhoun (2011) relies in part on parent report, it is also possible that the decrease in autism severity observed among older children could be somewhat related to parental perceptions, with parents of older children having learned to manage their child's impairments effectively and therefore perceiving any difficulties as less severe than do parents of younger children. Still, age may relate to parental stress differently at different stages of development, with parents coping with more severe symptoms in younger children, and issues pertaining to the child's future once children are older.

As seen in the literature reviewed thus far, raising a child with autism often poses sizable challenges for parent psychological well-being and even the quality of the relationship between parents. Importantly, the autism diagnosis itself, a child's level of severity on the autism spectrum, and child age likely have important implications for

parent well-being. Yet, the precise role of each of these variables in parent well-being remain somewhat unclear and deserves more research attention. The next section outlines one way to consider these and other contextual factors that might explain the possible relationships between parent, child, and environmental characteristics and parent well-being.

### **A Dynamic Process Model of Parent Well-Being**

Research by Resch, Benz, and Elliott (2012) evaluating a dynamic process model of well-being among parents of children with developmental disabilities offers one explanation of how each of the variables explored thus far interact to predict parent well-being. The model emphasizes the importance of both social and emotional factors, as well as appraisals of the situation surrounding the child's condition, in predicting parent well-being. Specifically, characteristics of both parents and children, including the severity of the child's condition and the ability of the parent to resolve problems, are hypothesized to be predictive of environmental and social variables, such as financial difficulties and access to services for the child. Both parent/child characteristics and environmental/social factors are, in turn, expected to predict both appraisal processes and parent well-being as conceptualized by physical and mental health. According to the model, appraisals refer to either threat appraisals, consisting of the identification of threats to the parent's preferred way of life related to the child's condition, such as a belief that one is now less able to achieve important goals, or the more positive growth appraisals, involving the identification of growth experienced by the parent as a result of raising the child, such as a perceived increase in personal strength.

Resch et al. (2012) tested their proposed model with a sample of parents of 140 children who ranged in age from infancy to adulthood and were diagnosed with developmental disabilities including brain injury, autism, and visual or auditory impairment, among others. Using structural equation modeling, Resch and colleagues determined that the hypothesized dynamic process model of parent well-being was largely supported. Specifically, in contrast to some of the work reviewed earlier (e.g., Bromley et al., 2004; Dumas et al., 1991), the severity of a child's disability was not a significant direct predictor of parent well-being, but was positively associated with growth and threat appraisals. Furthermore, the presence of resources and supports, an environmental variable, was positively associated with parent well-being and inversely associated with threat appraisals. Problem solving, a parent characteristic, was also inversely associated with threat appraisals and positively associated with parental well-being. Finally, although growth appraisals were positively associated with parent well-being, threat appraisals were inversely related to well-being.

This dynamic process model offers unique insight into the relationship between child health and parent well-being. Perhaps most interestingly, the model demonstrates complex layers of processes involved in predicting parent outcomes. Although condition severity was not directly associated with parent well-being when controlling for other relevant variables (Resch et al., 2012), it did predict both threat and growth appraisals, each of which was, in turn, related to parent well-being. Resch et al.'s work was also instrumental in evaluating and identifying the presence and importance of environmental and social resources in addition to parental perceptions of both growth and threats associated with their child's condition. The model thus offers a valuable contribution to

the field by integrating several key predictors of parent well-being and by identifying possible mediators of the link between parenting and well-being; however, more work can be done, particularly in light of measuring and considering other factors that might be related to the dynamic processes involved, such as specific parent coping strategies. The following sections explore the coping literature as it relates to parents of children with autism and discuss the importance of religious coping strategies as potential moderators of parenting stress among this population.

### **Coping: Theoretical Models, Measurement, and Links to Parenting**

**Defining coping.** Drawing on Resch et al.'s (2012) dynamic process model, which pinpoints parents' appraisals as central mechanisms that explain and mediate associations between stressors associated with a child's developmental disability and parent well-being, parents' coping strategies likely also play a critical role in the relationship between stress and well-being. Folkman and Lazarus's (1985) seminal work on coping emphasizes the importance of appraisals in understanding the impact of stress. When experiencing a stressor, one must first determine, through an appraisal process, whether the stressor is even relevant and which resources are required to address it. Primary appraisal involves assessing the personal relevance of a stressor, whereas secondary appraisal concerns the evaluation of possible coping strategies. According to Folkman and Lazarus (1985), "[c]oping refers to cognitive and behavioral efforts to manage (master, reduce, or tolerate) a troubled person-environment relationship" (p. 152). Folkman and Lazarus identify two types of coping: problem-focused and emotion-focused. Problem-focused coping involves taking action to address a stressor, and emotion-focused coping encompasses managing negative emotions associated with the

stressor. Importantly, the specific type of coping one employs is theorized to be based on one's appraisal of a stressful situation as changeable or not. When considered in terms of parents of children with autism, the work of Folkman and Lazarus suggests that the type of coping employed by parents seeking to manage stress associated with a child's diagnosis could be informed by whether parents view an autism diagnosis as an unchangeable loss or as a challenge that can be effectively addressed. Such perceptions could be intricately related to different aspects of religious coping, as will be discussed further in later sections.

Building upon their theory of coping, Folkman and Lazarus developed the Ways of Coping measure (Folkman & Lazarus, 1985; Lazarus & Folkman, 1984), a tool to measure the coping strategies that individuals employ. Originally constructed using a sample of college students experiencing stressors related to a midterm exam, factor analysis revealed that the 67-item measure consists of one problem-focused subscale, six emotion-focused subscales, and one subscale that incorporates both problem- and emotion-focused coping. The problem-focused subscale measures behaviors such as making a plan and studying the situation, and the emotion-focused subscales include wishful thinking, distancing, emphasizing the positive, self-blame, tension reduction, and self-isolation. Looking for social support is a mixed emotion- and problem-focused subscale. This measure originally offered an important contribution to the field of coping research by providing a theoretically informed tool that accounted for a variety of coping strategies, although the Ways of Coping measure accounts for religious coping with only a single item addressing prayer (Lazarus & Folkman, 1984).

In an effort to measure coping strategies more comprehensively than Folkman and Lazarus (1985), Carver, Scheier, and Weintraub (1989) developed the Coping Orientation to Problems Experienced (COPE). This 60-item scale evaluates the use of a variety of strategies classified as either problem-focused coping, emotion-focused coping, or unhelpful coping. Problem-focused strategies assessed by the COPE include active coping, or taking action to solve the problem; planning; suppression of competing activities in order to focus on resolving the situation; restraint coping, in order to avoid acting too quickly; and instrumental social support, in which social support is sought for the purposes of taking action to address the stressor. Under Carver et al.'s (1989) conceptualization, emotion-focused coping includes emotional social support; positive reinterpretation, or identifying opportunities for growth and/or positive aspects of a situation; denial; and turning to religion. Focusing on or venting emotions; alcohol-drug disengagement; mental disengagement or using other activities to distract oneself from the stressor; and behavioral disengagement, in which one ceases to attempt to manage the stressor, are classified as unhelpful strategies by the COPE.

Carver (1997) later drew upon additional research to modify and streamline the COPE into a shorter measure, the 28-item Brief COPE, consisting of 14 subscales. These subscales include active coping, planning, positive reframing, acceptance, humor, religion, using emotional support, using instrumental support, self-distraction, denial, venting, substance use, behavioral disengagement, and self-blame. Importantly, Carver's work, instead of fitting items to either a problem-focused or emotion-focused subscale, moves beyond the work of Folkman and Lazarus (1985) by assigning a unique subscale to each of the coping strategies examined. Furthermore, the COPE and Brief COPE also



evaluate religious coping through items addressing seeking comfort from religion and from God, praying, and trusting God, although, as discussed later, this conceptualization is somewhat superficial.

Taken together, the work of Carver and colleagues and Folkman and Lazarus has exerted a substantial impact on the field of coping research. As of October 2015, Folkman and Lazarus' (1985) work introducing the Ways of Coping scale has been cited 1185 times by articles indexed in PsycINFO, and the original articles for the COPE and Brief COPE created by Carver et al. have been cited 2728 and 1010 times, respectively. Given the importance of these measures and the coping theory that informed them, the following subsection examines how this largely secular understanding of coping may apply to parents of children with autism before turning to an in-depth exploration of religious coping specifically.

### **Coping Among Parents of Children with Autism**

Research exploring coping strategies used by parents of children with autism has evaluated coping from a variety of perspectives both similar to and distinct from the work of Folkman and Lazarus (1985) and Carver et al. (1989). Benson (2010) used the Brief COPE to study coping and well-being among 113 mothers of 6- to 9-year-old-children with autism. Factor analysis of the Brief COPE subscales in this sample revealed that commonly used coping strategies included engagement, which encompassed planning, active coping, and social support; distraction, including strategies such as venting, humor, self-distraction, and self-blame; disengagement in the form of behavioral disengagement, substance use, or denial; and cognitive reframing strategies, through which stressors are reinterpreted via the use of religion, acceptance of the stressor, or positive reframing of

the stressor similar to the positive reinterpretation discussed above. In terms of implications for parent outcomes, the use of distraction and disengagement was related to higher levels of anger and depression among mothers, but only when child problem behavior was low. Reframing and engagement were unrelated to anger and depression among mothers of children with autism. However, maternal well-being, measured using items assessing feelings of hopefulness and happiness, was negatively associated with disengagement strategies and positively associated with cognitive reframing. Engagement was positively associated with maternal well-being when the child's symptoms were more severe. These findings further illustrate the importance of considering the severity of the child's condition, in this case due to the relationship between severity and the utility of specific coping strategies. Notably, Benson (2010) reported that religion emerged as one of the cognitive reframing strategies linked to maternal well-being. Based on Benson's work, it appears that religious beliefs and prayer, the forms of religious coping assessed by the Brief COPE (Carver, 1997), may be valuable resources for facilitating parental recognition of the positive elements of the child's diagnosis and acceptance of the associated stressors.

Minnes, Perry, and Weiss (2015) examined predictors of well-being and distress in 155 mothers of 3- to 6-year-old children with autism or another intellectual and/or developmental disability. Specifically, Minnes et al. (2015) explored the role of stressors, family resources, and coping strategies as predictors of parent distress and positive gain. Stressors included a child with an autism spectrum disorder, child adaptive and maladaptive behavior, and financial hardship. Family resources encompassed support available from both professionals and nonprofessionals, and coping strategies included

parent empowerment, or the ability of the parent to manage various issues one might face, and the positive reframing of a situation. Parent distress was measured using a subscale of the Parent Stress Index Short Form, and positive gain refers to positive aspects of parenting experiences. Minnes et al. (2015) concluded that, although low empowerment and financial difficulties were positively associated with stress, reframing and empowerment were directly predictive of positive gain. These findings further support the idea that the use of certain coping strategies can be beneficial to parents of children with developmental disabilities. In particular, reframing, an emotion-focused strategy measured by the COPE (Carver et al., 1989) and Brief COPE (Carver, 1997), has been found to play an important role in parent well-being across multiple studies (Benson, 2010; Minnes et al., 2015), and some evidence suggests that religious coping may be a part of the reframing process (Benson, 2010).

**The particular importance of social support.** Of the coping strategies discussed thus far, some research suggests that social support may play an especially important role in the psychological well-being of parents of children with autism. Research by Henderson and Vandenberg (1992) identified social support, locus of control, and child symptom severity as significant predictors of family adjustment among mothers of children with autism. More recently, Lovell, Moss, and Wetherell (2012) measured several different forms of social support in 54 parents of a child with ADHD or autism, including the ability to interact with and confide in others, access to tangible resources, and the recognition that one's own circumstances are better than those of some other people. All forms of social support except for access to tangible resources were significantly and negatively correlated with both anxiety and depression. In a descriptive

study of self-reported coping strategies of parents of children with autism, Luther, Canham, and Cureton (2005) noted that social support was the most commonly reported strategy following reframing. Importantly, previous literature has conceptualized social support as both a specific coping strategy (Carver et al., 1989; Folkman & Lazarus, 1985) and as a more general resource (Minnes et al., 2015). Furthermore, religious support specifically constitutes a distinct form of social support with potentially important implications for life satisfaction and depression (Fiala, Bjorck, & Gorsuch, 2002). Thus, the present study conceptualizes social support as a unique component of coping, especially given its possible relationship with religious coping, an area that will be discussed in greater detail in later sections.

**The Double ABCX model.** Complementing the dynamic process model of parent well-being discussed earlier (Resch et al., 2012), the Double ABCX <sup>1</sup>model of family adaptation explicitly addresses the role of coping strategies in predicting well-being among parents of children with autism (Manning, Wainwright, & Bennett, 2011). Manning et al. (2011) evaluated this model in a sample of caregivers of 195 children with an autism spectrum disorder; the children were between the ages of six and 12. According to the Double ABCX model, family adaptation (X) is predicted by the presence of stressors and associated demands (A), in this case stress related to the child's autism diagnosis and behavior. The use of coping strategies plays an important role in bridging the association between stressors and adaptation, with family resources (B) and appraisals (C) moderating the role of coping. Ultimately, Manning et al. (2011) observed support for the Double ABCX model. Although their sample reported high levels of

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<sup>1</sup> The term "Double ABCX" refers only to the original labeling of the relevant constructs with repeating pairs of letters, which has been simplified here to facilitate understanding.

stress, they also reported moderate levels of family functioning. Interestingly, child autism symptom severity was not a significant predictor of family functioning or parenting distress. Instead, child problem behavior severity, an issue not considered a core symptom of autism yet somewhat more common among children further down on the autism spectrum (APA, 2013), was significantly positively associated with distress related to parenting and inversely associated with family functioning. Furthermore, the two coping strategies assessed in this study, spiritual support and relying on family and friends, were each inversely related to parenting distress, further highlighting the potential importance of both social support and religious coping in parent well-being. The process of reframing, conceptualized by Manning et al. (2011) as a form of appraisal in which one shifts to a more positive view of one's situation, was also associated with reduced distress and better family functioning.

The Double ABCX model explored by Manning et al. (2011), when considered in conjunction with the dynamic process model evaluated by Resch et al. (2012), offers a head start into a comprehensive understanding of the well-being of parents of children with autism by considering the role of parent coping strategies. Notably, both models account for the key roles of parent and child characteristics discussed earlier and offer complementary findings in this area. Specifically, it seems that while the severity of a child's condition is not directly related to parent well-being when accounting for the other variables in the model, child behavior problems, which may be related to the presence of autism, do play an important role (Manning et al., 2011; Resch et al., 2012). Given the existence of contradictory findings concerning the role of condition severity in parent well-being (Bromley et al., 2004; Dumas et al., 1991; Manning et al., 2011; Resch

et al., 2012;), additional research is needed to increase understanding of this issue. Each model also captures the role of appraisal processes and available resources. Yet, the Double ABCX model emphasizes coping strategies to a greater extent than the dynamic process model. As seen in the work of Benson (2010), Carver et al. (1989), Lazarus and Folkman (1984), and Manning et al. (2011), some form of religious coping seems to play a prominent role both in coping processes in general and in the coping of parents of children with autism specifically. Yet, as Pargament and colleagues assert (Pargament, Koenig, & Perez, 2000; Pargament, Feuille, & Burdzy, 2011), many of these prior conceptualizations of religious coping have not fully captured the full range of religious coping behaviors. In an effort to rectify this limitation, Pargament and others have developed a more thorough body of work examining religious coping as a unique family of coping strategies.

### **Religious Coping: Definitions, Measurement, and Relationship with Well-Being**

**Defining religious coping.** Pargament (1997) defines religion as “a search for significance in ways related to the sacred” (p. 32). According to Pargament, *significance* is a broad category encompassing both spiritual and material things valued by a group or individual. In turn, religious coping constitutes “efforts to understand and deal with life stressors in ways related to the sacred” (Pargament et al., 2011, p. 52), with the sacred encompassing the divine and that related to the divine. However, a key issue in discussing religious coping is the relationship between religion and spirituality. As discussed by Zinnbauer, Pargament, and Scott (1999), traditional psychological investigations of religion and spirituality treated both constructs as closely linked. In contrast, more recent definitions characterize religion and spirituality as separate entities,

often distinguishing between spirituality as an individual's personal beliefs and religion as a set of institutionalized practices. The present study recognizes the difficulty in separating the concepts of religion and spirituality and addresses this challenge by defining religious coping primarily in the context of the institutionalized practice of religion. At the same time, spirituality is broadly measured in the context of a framework developed by Seidlitz et al. (2002) in which spirituality functions as a source of purpose, fulfillment, and peace while, like religion, also requiring effort to sustain.

According to Pargament (1997), religious coping is believed to either seek to conserve or transform significance in the face of stress. Efforts to conserve significance include preservation and reconstruction. Preservation includes techniques such as religious perseverance, in which religious beliefs are maintained in the midst of challenges such as persecution; religious support, either from God or religious communities; or marking boundaries between one's religious beliefs or religious community and outside beliefs or influences. Marking boundaries can occur either socially via emphasizing ingroup-outgroup differences, or physically as seen in monasteries (Pargament, 1997). Conservation of significance may also occur through reconstruction, or finding new ways to reach old forms of significance. Reconstruction can involve religious switching, or changing one's view of God or one's religious group while still attempting to conserve what one considers significant; or religious purification, such as practices involving penance and the confession of sins or religious reframing of events or of the sacred. Reframing of events in terms of one's religious beliefs, a strategy explored to some extent by Benson (2010), may occur when an individual concludes that a stressful event was part of God's will and/or beyond human understanding. Reframing

of the sacred involves changing one's view of God in response to a stressful event, e.g. developing a view of God as a just punisher (Pargament, 1997).

When conservation of significance is not feasible, transformation, which involves alterations to what is actually considered significant, may be necessary. Pargament (1997) identifies re-valuation and re-creation as two forms of religious coping related to the transformation of significance. Re-valuation involves changing what is considered significant while still using established methods to attain significance. This may occur through looking for new religious purpose or through religious rituals associated with rites of passage, such as funerals, that may allow participants to understand that new objects of significance are now required. In contrast to re-valuation, re-creation involves altering both the methods one uses to attain significance and what are considered sources of significance. Pargament (1997) argues that religious conversion and, because of the numerous behavioral and emotional changes required, forgiveness, each facilitate the re-creation of significance in the religious realm. Ultimately, all of these strategies, whether conservation or transformation, share the aim of attaining significance or meaning in the face of stress and use religion as an integral component of this process.

The diagnosis of a child with autism likely constitutes a strong threat to significance, in this case significance related to the health of one's child. Learning that one's child has autism could challenge one's faith or beliefs about God, resulting in efforts to conserve or transform significance or reevaluate one's religious values. If parents seek to conserve significance, preservation efforts such as perseverance in one's religious beliefs despite facing an undesired outcome and relying on support from a religious community may be particularly important. Parents might also conserve



significance by reevaluating beliefs about God or the religious meaning of their parental roles in light of the child's disability. Alternatively, parents may engage in a transformation of significance by switching to a religious group that is more supportive or that offers a more compelling explanation for their situation, abandoning religion entirely out of anger with God, or by relinquishing any blame they hold towards themselves or towards God for their child's challenges. Indeed, a variety of religious coping strategies are available when significance is threatened, a state of affairs which led Pargament and colleagues to design a measure intended to account for a range of religious coping behaviors.

### **Measuring Religious Coping and Links with Outcomes**

In an effort to measure religious coping in greater depth than previous coping scales, Pargament and colleagues developed the RCOPE (Pargament, Koenig, & Perez, 2000; Pargament et al., 2011). The RCOPE measures a wide range of religious coping techniques classified in terms of their believed functions. Table 1 lists RCOPE subscales, which include achieving a life transformation, finding meaning, gaining intimacy with others and closeness to God, gaining control, and gaining comfort and closeness to God, among others. Pargament and colleagues validated the RCOPE using samples of 551 hospitalized adults and 540 college students who had undergone a significant negative stressor. However, the original RCOPE contains 21 subscales and is therefore a long and cumbersome measure, which led to the creation of the Brief RCOPE (Pargament, Smith, Koenig, & Perez, 1998; Pargament et al., 2011). A factor analysis of the RCOPE was conducted using the college student and hospital samples, in addition to a sample of 269 individuals who lived near the location of the Oklahoma City bombing in 1995. This

Table 1  
RCOPE Subscales and Definitions of Religious Coping Methods

RCOPE Subscale	Definition
<b>Religious Methods of Coping to Find Meaning</b>	
Benevolent Religious Reappraisal	Redefining the stressor through religion as benevolent and potentially beneficial
Punishing God Reappraisal	Redefining the stressor as a punishment from God for the individual's sins
Demonic Reappraisal	Redefining the stressor as an act of the devil
Reappraisal of God's Powers	Redefining God's power to influence the stressful situation
<b>Religious Methods of Coping to Gain Control</b>	
Collaborative Religious Coping	Seeking control through a problem-solving partnership with God
Active Religious Surrender	An active giving up of control to God in coping
Passive Religious Deferral	Passive waiting for God to control the situation
Pleading for Direct Intercession	Seeking control indirectly by pleading to God for a miracle or divine intercession
Self-Directing Religious Coping	Seeking control directly through individual initiative rather than help from God
<b>Religious Methods of Coping to Gain Comfort and Closeness to God</b>	
Seeking Spiritual Support	Searching for comfort and reassurance through God's love and care
Religious Focus	Engaging in religious activities to shift focus from the stressor
Religious Purification	Searching for spiritual cleansing through religious actions
Spiritual Connection	Experiencing a sense of connectedness with forces that transcend the individual
Spiritual Discontent	Expressing confusion and dissatisfaction with God's relationship to the individual in the stressful situation
Marking Religious Boundaries	Clearly demarcating acceptable from unacceptable religious behavior and remaining within religious boundaries
<b>Religious Methods of Coping to Gain Intimacy with Others and Closeness to God</b>	
Seeking Support from Clergy/Members	Searching for comfort and reassurance through the love and care of congregation members and clergy
Religious Helping	Attempting to provide spiritual support and comfort to others
Interpersonal Religious Discontent	Expressing confusion and dissatisfaction with the relationship of clergy or congregation members to the individual
<b>Religious Methods of Coping to Achieve a Life Transformation</b>	
Seeking Religious Direction	Looking to religion for assistance in finding a new direction for living when the old one may no longer be viable
Religious Conversion	Looking to religion for a radical change in life
Religious Forgiving	Looking to religions for help in shifting to a state of peace from the anger, hurt, and fear associated with an offense

process revealed two factors—positive religious coping and negative religious coping. These results were then used to create the Brief RCOPE, a measure consisting of two subscales including items chosen based on their coverage of religious coping strategies and factor loadings (see Table 1). The positive religious coping subscale encompasses a set of strategies indicative of a healthy relationship with God and religion and includes items such as, “Focused on religion to stop worrying about my problems” and, “Sought God’s love and care”. In contrast, the negative religious coping subscale captures strategies associated with religious struggles with God, the devil, and one’s religious community, and includes, “Felt punished by God for my lack of devotion” and, “Questioned God’s love and care” (Pargament et al., 2011, p. 57).

Table 2  
The Brief RCOPE:  
Positive and Negative Religious Coping Subscale Items

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**Positive Religious Coping Subscale Items**

- 1     Looked for a stronger connection with God
- 2     Sought God’s love and care
- 3     Sought help from God in letting go of my anger
- 4     Tried to put my plans into action together with God
- 5     Tried to see how God might be trying to strengthen me in this situation
- 6     Asked forgiveness for my sins
- 7     Focused on religion to stop worrying about my problems

**Negative Religious Coping Subscale Items**

- 8     Wondered why God had abandoned me
- 9     Felt punished by God for my lack of devotion
- 10    Wondered what I did for God to punish me
- 11    Questioned God’s love for me
- 12    Wondered whether my church had abandoned me
- 13    Decided the devil made this happen
- 14    Questioned the power of God

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*Note.* Tables 1 and 2 adapted from Pargament, Feuille, & Burdzy (2011)

A review by Pargament and colleagues (2011) discusses many of the well-being and mental health outcomes associated with positive and negative religious coping. Previous work has concluded that negative religious coping is associated with more callousness towards others, psychological distress, depression, and lower quality of life, in addition to lower life satisfaction and mental and physical health. In turn, positive religious coping tends to be associated with more life satisfaction, spiritual growth following stress, and other well-being variables, and with less psychosomatic symptoms (Bjorck & Thurman, 2007; Pargament et al., 1998, 2011). Additionally, the associations between adjustment and positive religious coping and maladjustment and negative religious coping have been further supported by a meta-analysis of 49 studies conducted by Ano and Vasconcelles (2005).

### **Religious Coping by Parents of Children with Autism**

Notably, little extant research has explored patterns of religious coping or its associated outcomes among parents of children with autism. Although the dynamic process and Double ABCX models together account for the role of environmental variables, individual characteristics, and appraisal and coping processes in parent well-being, the precise role of religious coping in the well-being of parents of children with autism remains unclear.

As implied earlier, some evidence suggests that, consistent with the work of Folkman and Lazarus (1985) exploring when an individual is most likely to use emotion-focused or problem-focused coping, the way parents view their child's autism condition could influence their likelihood of relying on religious coping. Among a sample of college students reporting either a Catholic or Protestant Christian religious affiliation,

Bjorck and Cohen (1993) observed that in response to hypothetical stressful situations, participants identified religious coping as a possible strategy for addressing the stressor most frequently when the scenario involved an actual or potential loss as opposed to a potential improvement in one's situation. Furthermore, religious coping was most often anticipated in response to a possible loss rather than an actual one. Thus, religious coping could be viewed as analogous to emotion-focused coping in that the degree to which a stressor is believed to be changeable could influence the likelihood of selecting each of these coping methods. These findings offer several important implications for religious coping by parents of children with autism. First, if having a child with autism is viewed as a loss, in this case the loss of a typically developing child, parents of a child with autism may be more likely to turn to religious coping. A similar, and possibly stronger, pattern could be expected if the child's autism is viewed as having the potential to limit opportunities for the child in the future. Yet, religious coping may be less common among parents who instead focus on the potential for improvement in the child's condition via intervention, as Bjorck and Cohen's (1993) participants were less likely to use religious coping as a resource when facing stressors pertaining to possible gains.

Qualitative research offers an opportunity to examine broad trends related to the use of religious coping and has established the unique importance of religion in the lives of many parents of children with developmental disabilities (Skinner, Correa, Skinner, & Bailey, 2001; Weisner, Beiser, & Stolze, 1991). In a largely qualitative study of the role of religion in predominantly Judeo-Christian parents of children between the ages of three and five with developmental delays, Weisner et al. (1991) noted that religious families tended to use religion as a coping strategy and received support from more

people, although no difference was observed in emotional adjustment or peace of mind between parents in nonreligious and religious families. Skinner et al. (2001) also examined religious coping among parents of children with developmental delays, but focused on a sample of Mexican and Puerto Rican parents of children from birth to six years of age living in the United States. Interestingly, among this group of people, institutional religion and a more personal faith were both important, but faith seemed to play a more prominent role as a resource for coping with the child's condition.

Additional work has sought to further explore outcomes associated with parent religious coping. Tarakeshwar and Pargament (2001) studied religious coping among 65 parents of children with autism who ranged in age from four to 24. Parents completed measures of religious coping and religiosity, as well as stress-related growth, depressive symptoms, and anxiety. Religious outcome, or changes in spiritual growth and closeness to God and church as a result of the challenge of raising a child with autism, was also assessed. Negative religious coping was significantly predictive of depressive affect and negative religious outcome (i.e., a lack of increase in spiritual growth and closeness to religion and God), and positive religious coping was directly associated with stress-related growth and positive religious outcome (i.e., increases in spiritual growth and closeness to church and God).

Gallagher, Phillips, Lee, and Carroll (2015) explored religious coping among 32 parents of 3- to 19-year-old children with a developmental disability. Unlike Tarakeshwar and Pargament (2001), Gallagher and colleagues included parents of children with a variety of other developmental disabilities in addition to autism, specifically Smith-Magenis syndrome, Down syndrome, and Cornelia de Lange syndrome. The authors

measured spirituality, depression, and social support, with spirituality characterized as a set of nondenominational beliefs separate from religious practice. Social support was inversely related to depression but, in contrast to other research, higher levels of spirituality were predictive of increased depression among parents. Spirituality was also higher in individuals with less social support. Gallagher et al. (2015) followed up this quantitative approach with qualitative interviews of five mothers from the study who were high in both spirituality and depression. This sub-sample consisted of a mix of Christians (two of whom were Catholic), Muslims, and one unaffiliated individual with a Muslim and Christian family background. Themes that emerged from the interviews included spirituality as a mechanism to obtain release from stress, as a source of support, and as a last resort. Importantly, the authors note that the surprising positive association between spirituality and depression found could be explained by the use of negative religious coping strategies, such as frustration with God, by the participants.

As discussed earlier, child behavior problems are often tied to parental well-being when raising a child with a developmental disability (Dumas et al., 1991). Weyand, O’Laughlin, and Bennett (2013) studied the role of biblical conservatism and sanctification of parenting in the well-being of individuals parenting a child with behavior problems. Biblical conservatism encompasses belief in original sin and that sin will be punished, as well as a literal interpretation of the Bible. These beliefs may influence parenting, including the use of corporal punishment and the extent to which child obedience is emphasized. Sanctification of parenting involves viewing parenting as meaningful in a spiritual or religious sense. Weyand et al. (2013) examined these religiosity variables, as well as positive and negative religious coping, as they relate to

parent functioning, measured via self-report measures of parental competence and parenting stress. A range of religious affiliations were represented in the sample of 139 parents, including mostly Protestant Christians in addition to Catholics, Mormons, Buddhists, Taoists, atheists, and others. The results indicated that high levels of child behavior problems were associated with more stress, less competence, less use of positive religious coping, and higher sanctification of parenting. No effects of biblical conservatism or negative religious coping were observed. Notably, the positive association between child behavior problems and parenting stress was less pronounced for parents high in sanctification of parenting. Furthermore, positive religious coping was associated with greater competence among parents of children with more behavior problems, but was not associated with less stress. Indeed, positive religious coping was associated with higher stress in parents of children with low behavior problems and, among parents of children with high levels of behavior problems, stress remained high regardless of positive religious coping scores. These results offer support for the benefits of religious coping, particularly with regard to parenting and parenting attitudes. Positive religious coping was predictive of parental competence scores among parents of children with higher levels of behavior problems, and the association between stress and positive religious coping among parents of children with low behavior problems is logical given that individuals seek coping strategies when under stress. In addition, sanctification of parenting was predictive of less stress (Weyand et al., 2013). Although prior research has established that religious coping may serve as a useful resource for parents of children with autism, additional work is needed to clarify the precise role of religious coping in parent well-being.



## **Other Religiosity Variables as Potential Predictors of Well-Being**

Having introduced the concepts of religious coping in general and positive and negative religious coping specifically, it is necessary to consider other religiosity variables that may also act as predictors of psychological well-being. Specifically, religious identity, religious participation, and the availability of religious support may each serve as additional dimensions of religiosity that may be related to more general coping behavior. Built upon the idea of Black identity described by Sellers, Rowley, Chavous, Shelton, and Smith (1997), religious identity can encompass religious regard, or one's positive emotions toward one's religion, and religious centrality, or the extent to which one's religion is a key component of one's sense of self. Previously studied in relation to adolescent development (Chan, Tsai, & Fuligni, 2014; Davis & Kiang, 2016; Lopez, Huynh, & Fuligni, 2011), religious identity may have important implications that parallel religious coping among adults, as high religious identity may contribute to positive well-being outcomes. Likewise, religious participation, or involvement in religious social activities, religious services, or other religious activities, may also be associated with greater psychological well-being, as indicated by the work of Sternthal, Williams, Musick, and Buck (2010) suggesting that attendance of religious services once a week could be inversely related to the presence of symptoms of anxiety and depression. As such, religious identity and religious participation may moderate the relationship between stress and psychological well-being (Pargament, 1997).

Notably, other research by Ekas, Whitman, and Shivers (2009) suggests that some dimensions of religiosity and spirituality may vary in their efficacy as coping resources, particularly among mothers of children with autism. In a study of 119 mothers of children

between two and 18 years old and diagnosed with an autism spectrum disorder, Ekas and colleagues measured spirituality, conceptualized as closeness to creation and to God, religious beliefs, and religious activities, encompassing involvement in public and private religious practices. Whereas spirituality was associated with a variety of well-being outcomes, including increased life satisfaction, reduced parental stress, and increased positive affect, associations with well-being differed between religious practices and religious beliefs. Although religious beliefs were associated with reduced depressive symptoms among mothers of children with autism, religious activities were associated with increased parental stress and reduced positive affect. In light of other work suggesting that religious participation specifically could be supportive of psychological well-being (Sternthal et al., 2010), additional research is needed to further evaluate the role of religious participation as a potential avenue of support for parents of children with autism.

Related to social support, religious support may also play some role in parent well-being. As measured by Fiala et al. (2002) among a Protestant Christian sample, religious support can be delineated by perceived support from God, support from church leaders, and support from one's congregation. Although some elements of this conceptualization of religious support are captured by the RCOPE and Brief RCOPE (see Tables 1 and 2), religious social support is a distinct and complex construct worth considering in greater depth (Fiala et al., 2002), especially given the unique role of social support in more general processes of coping discussed earlier. Thus, the proposed study will consider religious social support, specifically congregational support, as a predictor

of psychological well-being and as an additional potential moderator of the relationship between stress and well-being.

### **Context of Religious Coping and Associated Benefits**

Given the benefits associated with certain forms of religious coping, it is important to understand when religious coping is most beneficial, and the processes by which religion might have promotive and/or protective effects. Considering this question broadly, Pargament and colleagues note that the use of religious coping is likely more helpful among individuals with a high religious commitment and/or facing high stress situations. Pargament (1997) also identifies three models that seek to more fully explain the relationship between stress, religious coping, and the outcomes of coping with a stressor. In each of these models, Pargament (1997) offers a theoretical explanation of the role of religion as a deterrent or moderator of the relationship between stress level and the positivity or negativity of the outcomes associated with a stressor.

Under the *religious stress moderator model*, religious coping in general (not accounting for positive and negative religious coping) acts as a moderator of the association between stress and outcomes. According to this model, religious coping is most relevant to well-being under high levels of stress. Specifically, as stress level increases, individuals who use more religious coping will experience more positive outcomes than individuals who use less religious coping. In contrast, according to the *religious stress deterrent model*, higher levels of religious coping are associated with superior outcomes regardless of stress level. Finally, the *combined religious moderator-deterrent model* attempts to reconcile the moderator and deterrent models by asserting that religious coping is always associated with superior outcomes, regardless of stress

level, but this effect becomes more pronounced as stress level increases. Thus, individuals who display low levels of religious coping should always experience poorer outcomes than individuals who use religious coping more frequently, but a greater disparity between the outcomes experienced by each group should become apparent under high stress conditions.

Although Pargament (1997) reviews findings from the religious coping literature that offer some degree of support for each of these models, few studies have explicitly intended to test the models directly. Furthermore, many of the studies Pargament references measured religiosity and religious coping in a variety of different ways. Religion and coping were conceptualized via religious coping scales as well as measures of religious attendance and personal religious activity. Some studies reviewed only used one item to measure religiosity. These differences and limitations in the measurement of religiosity and religious coping, combined with the fact that few studies exist that directly evaluate the possible models of religious coping, make it challenging to accurately determine which models are truly supported and under what circumstances, a goal made more difficult by the fact that the models do not account for the differences between positive and negative religious coping.

Bjorck and Thurman (2007) explored the relationships between number of negative life events experienced in the past year, positive and negative religious coping, and life satisfaction and depressive symptoms among a sample of Protestant Christians. Their results suggest that while positive religious coping seems to moderate the relationship between number of negative life events and depressive symptoms, negative religious coping may not and appears to be maladaptive regardless of the number of

negative life events experienced. In contrast, a more recent study (Ahles, Mezulis, & Hudson, 2015) of the associations between stress, depression, and religious coping over the course of eight weeks among 320 students from a small Christian university reported that, although positive religious coping was related to reduced depressive symptoms at baseline in a pattern consistent with the deterrent and moderator-deterrent models, it ultimately did not moderate the relationship between stress and depressive symptoms over time. Interestingly, negative religious coping did moderate this relationship, such that increased stress was linked with *greater* depression among individuals who used negative religious coping, a pattern not accounted for by models that define religious coping broadly. Of note, this relationship only appeared in participants high in religious commitment, a construct similar to the concept of religious participation discussed earlier. Clearly, the consideration of positive and negative religious coping, as well as whether stress is measured as the number of negative life events experienced or more generally as a separate construct, adds additional complexity that has not yet been sufficiently addressed in the literature. The present study seeks to thoroughly explore each of the models of religious coping discussed by Pargament among parents of children with autism specifically. Such a line of investigation will both contribute to the further development of religious coping theory and build upon the dynamic process and Double ABCX models to increase understanding of the roles of positive and negative religious coping, and other dimensions of religiosity, in parent well-being.

### **The Present Study**

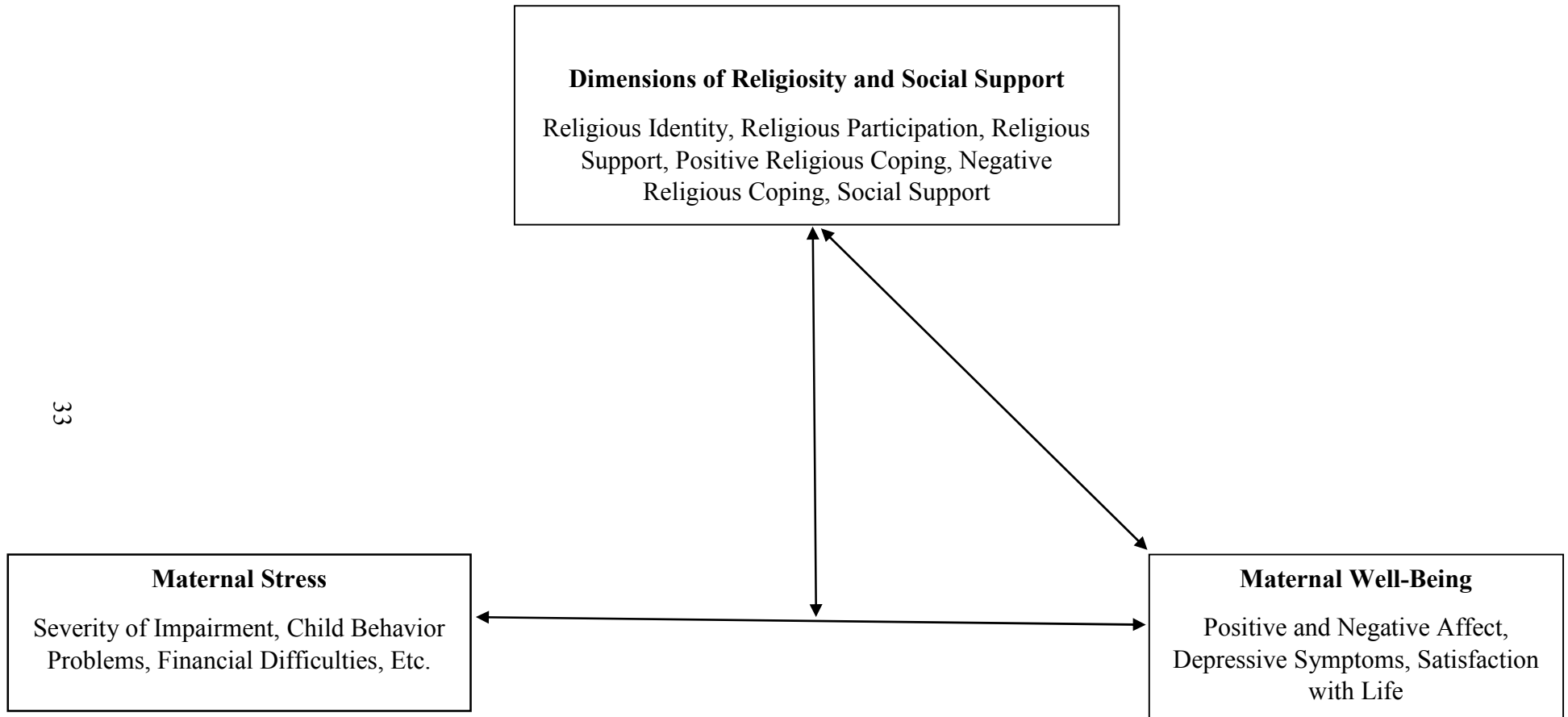
Religious coping strategies may function as important resources for many parents of children with autism. As such, it is necessary for researchers and practitioners to better

understand the role of religious coping as a potential moderator of the relationship between stress and psychological well-being among this population. The present study seeks to address this need by measuring parental stress related to parenting a child with autism, positive and negative religious coping, and several well-being indicators, including satisfaction with life, positive and negative affect, and depressive symptoms, among a sample of parents of children with autism. Each of these outcome variables was selected as a well-known indicator of either religion and spirituality or psychological well-being. They also provide a range of commonly measured well-being dimensions. Given that mothers may spend more time with their children (Konstantareas & Homatides, 1992) and perceive the need for more support than do fathers (Hartley & Schultz, 2015), the present study focuses exclusively on mothers of children with autism.

### **Hypotheses**

In an effort to increase understanding of the role of religiosity as a potential moderator of the relationship between stress and well-being among mothers of children with autism, the present investigation was guided by the conceptual model presented in Figure 1.

**Hypothesized associations between stress, religion, and well-being.** My first set of hypotheses focuses on the associations between stress and well-being whereby the stress experienced by mothers of children with autism is expected to be inversely related to psychological well-being. Specifically, I hypothesized that parental stress would be positively associated with negative affect and depressive symptoms, and inversely related to positive affect and satisfaction with life. For my second set of hypotheses, I expected that positive and negative religious coping, as well as spirituality, religious identity,



*Figure 1.* Conceptual model of the role of religion and social support in the relationship between stress associated with a child's autism spectrum disorder and maternal well-being.

participation, and social support, would act as predictors of well-being. Specifically, spirituality, positive religious coping, religious identity and participation, and social support were hypothesized to be positively associated with satisfaction with life and positive affect and inversely associated with negative affect and depressive symptoms. Negative religious coping was hypothesized to be inversely associated with positive affect and satisfaction with life, and positively associated with depressive symptoms and negative affect.

**Religion and social support as potential moderators.** Furthermore, with respect to my third set of hypotheses, as guided by prior models (e.g., the Double ABCX model and Pargament's (1997) religious stress models) and illustrated in Figure 1, spirituality, religious coping, religious identity, religious participation, and social support may also moderate the relationship between stress and well-being. In line with evidence offering some support for the religious stress deterrent model among parents of children with autism (Tarakeshwar & Pargament, 2001; Weyand et al., 2013), as well as previous work examining outcomes associated with positive and negative religious coping (Pargament et al., 2011), I hypothesized that mothers who reported higher levels of spirituality, positive religious coping, religious identity, religious participation, or social support would be protected against the detrimental effect of stress on well-being outcomes. Mothers who tapped into their religious resources in a positive and effective manner were expected to report higher life satisfaction and positive affect, and lower depressive symptoms and negative affect in the face of both low and high levels of stress, compared to mothers who reported lower levels of religiosity. However, going beyond existing models, I also examined negative religious coping and expected that the effect of stress on well-being would be exacerbated by negative religious coping; mothers who relied heavily on such



coping strategies should have reported particularly high levels of negative affect and depressive symptoms, and low levels of positive affect and satisfaction with life in the face of stress. My overall approach thus allowed me to test these specific hypotheses as well as explore alternative models while also accounting for the unique roles of positive and negative religious coping.

**Possible covariates.** Demographic information about the mothers and their children, including parent and child age, the mother's educational background, family income, the number of children with autism in the household, child gender, and whether the child with autism received special services at school were considered as possible covariates of the hypothesized relationships discussed above. Additionally, based on previous research suggesting that autism symptom severity and problem behavior may function as important predictors of parent well-being (Bromley et al., 2004; Dempster et al., 2013; Dumas et al., 1991), information concerning autism symptom severity and child problem behavior was also collected. As discussed in greater detail below, I examined zero-order correlations between these demographic variables and the well-being outcomes included in the study to determine which demographic variables to include as covariates in the regression models.

## METHOD

### Participants

Forty-one English speaking mothers between the ages of 25 and 57 years ( $M_{\text{age}} = 39.6$  years,  $SD = 8.16$ ) of a child between the ages of 3 and 18 and diagnosed with an autism spectrum disorder (7 female, 27 male, 7 not reported, ages 3-15 years,  $M_{\text{age}} = 7.94$  years,  $SD = 4.4$ ) were recruited from organizations that serve children with autism and their families to complete a series of questionnaires online using Qualtrics, a secure online data collection service. In order to participate, mothers were required to live with their child with autism. Participants represented a variety of religious affiliations including Baptist (9.8%), Catholic (9.8%), Episcopalian (2.4%), Lutheran (2.4%), Methodist (2.4%), Unity Church (2.4%), Christian not specified (14.6%), Buddhist (2.4%), Pagan (2.4%) and Unaffiliated (34.1%). Additional demographic information about the mothers and their children with autism is presented in Table 3.

### Procedure

Once an agency agreed to help recruit participants for the study, mothers affiliated with the agency received either an email or paper newsletter from the organization explaining the study and including a link to the Qualtrics survey. In one case, the organization distributed a flyer briefly explaining the study and directed interested mothers to contact me to receive the same letter sent out by the other organizations. I also attempted to recruit from an online forum on the Autism Speaks website that connects individuals interested in participating in research with studies examining autism.

Table 3  
Sample Characteristics

Characteristic	Number	%	Characteristic	Number	%
<b>Mother's Race</b>			<b>Child Gender</b>		
African American	5	12.2	Female	7	17.1
Caucasian	30	73.2	Male	27	65.9
Pacific Islander	1	2.4	Not Reported	7	17.1
Multiracial (White/Latina)	1	2.4	<b>Child Race</b>		
Not Reported	4	9.8	African American	4	9.8
<b>Mother's Education</b>			Caucasian	24	58.5
High School	6	14.6	Hispanic	1	2.4
Trade School	1	2.4	Pacific Islander	1	2.4
Some College	6	14.6	Multiracial	4	9.8
Associate's	4	9.8	Not Reported	7	17.1
Bachelor's	9	22.0	<b>Child Receiving School Services</b>		
Some Graduate School	2	4.9	Yes	29	70.7
Master's	7	17.1	No	5	12.2
Doctorate/Professional	2	4.9	Not Reported	7	17.1
Not Reported	4	9.8	<b>Religious Affiliation</b>		
<b>Mother's Employment</b>			Baptist	4	9.8
Employed	18	43.9	Catholic	4	9.8
Unemployed	19	46.3	Episcopalian	1	2.4
Not Reported	4	9.8	Lutheran	1	2.4
<b>Family Income</b>			Methodist	1	2.4
< \$20,000	7	17.1	Unity Church	1	2.4
\$20-40,000	7	17.1	Christian Not Specified	6	14.6
\$40-60,000	7	17.1	Buddhist	1	2.4
\$60-80,000	6	14.6	Pagan	1	2.4
> \$100,000	9	22.0	Unaffiliated	14	34.1
Not Reported	5	12.2	Not Reported	7	17.1
<b>Mother's Marital Status</b>			<b>Religious Congregation Member</b>		
Single	5	12.2	Yes	13	31.7
Married	20	48.8	No	21	51.2
Separated	3	7.3	Not Reported	7	17.1
Divorced	9	22.0	<b>Congregation Size</b>		
Not Reported	4	9.8	< 100	4	9.8
<b>More Than 1 Child with ASD</b>			200-500	1	2.4
Yes	5	12.2	2000-3000	3	7.3
No	32	78.0	15000-25000	2	4.9
Not Reported	4	9.8	Does Not Know	1	2.4
			Not Reported	30	73.2

Accessing the link directed participants to the Qualtrics website, where they were presented with an informed consent form explaining the study in greater depth and requesting their consent to participate. After providing informed consent, participants were asked to complete a series of questionnaires assessing demographic information about the mother and the child with autism, parental stress, positive and negative affect, depressive symptoms, satisfaction with life, social support, religious identity and participation, religious social support, and positive and negative religious coping. If a mother reported having more than one child with autism, she was directed to respond to the relevant questionnaires in reference to one of the children with autism.

Two different versions of the survey existed in order to account for the possibility of responses to one set of variables influencing subsequent responses (e.g., responding to items about stress could subsequently influence responses to well-being items). Version 1 of the survey collected demographic information about the mother and child before presenting the well-being, parental stress, religion/spirituality, and social support items in that order. Version 2 also began by collecting demographic information, but subsequently presented items measuring religion/spirituality, parental stress, well-being, and social support in that order. Participants were assigned to a version of the survey based on which organization they were affiliated with. A coin toss determined which version of the survey was assigned to the first organization recruited from, with the version of the survey alternating with each additional organization. Due to differences in participation rates between each organization, 30 participants completed Version 1, and 11 participants completed Version 2. All participants completed all measures with one exception. Those

who indicated that they were not members of a religious congregation were not presented with the measure of religious social support. Questionnaires took approximately 20-30 minutes to complete. After participants completed the questionnaires, they were thanked for their time, provided with a list of resources for parenting and for autism, and had the option of entering a drawing for one of four \$20 Target gift cards. Parents could also choose to receive a summary of the results upon completion of the research.

### **Measures**

**Demographic information.** Participants provided basic demographic information, including age, race/ethnicity, educational background, employment status, income, marital status, and number of children. Demographic information about the child with autism, including gender, age, race/ethnicity, grade in school, whether the child receives special services at school, information about the child's autism diagnosis, child behavior, and information (including autism diagnoses) about other family members and/or individuals who live in the child's household was also collected. Participants were also asked to provide their religious affiliation and information about membership in a particular church or other religious community.

**ASD severity.** I created several mother-report items based on the DSM-5 criteria for autism (APA, 2013) designed to measure the severity of the child's social, emotional, and cognitive functioning. The items are, "How would you describe your child's social functioning (e.g., communication, ability to form friendships, ability to carry on a conversation)?", "How would you describe your child's ability to maintain eye contact?", "How would you describe your child's emotional functioning (e.g., ability to express and

deal with emotions in a healthy way)?”, and “How would you describe your child’s cognitive functioning (e.g., ability to learn and process information)?”. Possible responses range from 0 = *Not at All Impaired* to 2 = *Very Impaired*. Two items, “How severe are your child’s repetitive behavior patterns?”, and “How severe is your child’s repetitive verbal behavior?” were designed to measure maternal perception of child repetitive behavior patterns, with possible responses ranging from 0=*Not at all Severe* to 2=*Very Severe*. Four additional items, “How difficult is it for you to manage your child’s behavior when interacting with him or her individually?”, “How difficult is it for you to manage your child’s behavior when interacting with him or her in public places?”, “How difficult is it for you to manage your child’s behavior when he or she is interacting with siblings or other family members?”, and “How difficult is it for teachers and other professionals to manage your child’s behavior at school?” were intended to measure an additional component of severity that may affect a mother’s everyday life. Possible responses range from 0 = *Not at all Difficult* to 2 = *Very Difficult*. Mothers were also asked to report how frequently their child engaged in several problem behaviors, including self-injury, aggression, disruptive behavior (e.g., throwing objects, intentionally damaging property), and elopement (e.g., leaving the house without anyone’s knowledge, running away from a parent in public). Possible responses ranged from 0=*Never or Rarely* to 4=*Multiple Times Per Day*.

**Parental stress.** The Parental Stress Scale (Berry & Jones, 1995) is an 18-item measure of stress associated with parenting and has previously been used among mothers of children with developmental disabilities. Participants were asked to consider their

child or children with autism when completing the scale, and responded to items such as, “The major source of stress in my life is my child)” and, “The behavior of my child is often embarrassing or stressful for me.” Possible responses range from 0 = *Strongly Disagree* to 4 = *Strongly Agree*. Higher scores reflect higher levels of parental stress. Eight items are reverse scored (Cronbach’s  $\alpha = .89$ ).

**Religious coping.** The Brief RCOPE (Pargament et al., 1998) consists of two seven-item subscales measuring positive and negative religious coping. Each subscale contains a list of religious coping strategies. Examples of positive religious coping strategies include, “Asked forgiveness for my sins” and “Sought God’s love and care,” whereas the negative religious coping subscale includes items such as, “Wondered whether my church had abandoned me” and, “Felt punished by God for my lack of devotion.” Participants identified how often they use a particular religious coping strategy by responding to each item using a scale ranging from 0 = *Not at All* to 3 = *A Great Deal*. Responses to each item were summed within a subscale to compute a total score for both positive and negative religious coping. Higher scores reflect higher levels of a particular religious coping style. Cronbach’s  $\alpha$  was .81 for positive religious coping and .78 for negative religious coping.

**Religious identity.** Religious identity was measured using an eight-item questionnaire adapted from the Multidimensional Inventory of Black Identity (Sellers et al., 1997) and utilized in previous work studying religious identity in adolescents and young adults (Chan et al., 2014; Davis & Kiang, 2016; Lopez et al., 2011). There are two four-item subscales, one for regard and one for centrality. The regard subscale measures

positive emotions toward one's religion (e.g., "I am proud to have my religious beliefs," "I feel that my religion has made valuable contributions to this society"). The centrality subscale determines the extent to which one's religion is central to one's sense of self (e.g., "I have a strong attachment to my religion," "I have a strong sense of belonging to my religion"). Participants indicate the extent to which they agree with each item using possible responses ranging from 0 = *Strongly Disagree* to 4 = *Strongly Agree*. Higher scores are indicative of stronger religious regard and religious centrality. Cronbach's  $\alpha$  was .93 for regard and .96 for centrality. Given that the regard and centrality subscales were significantly positively correlated,  $r(31) = .86, p < .001$ , to increase parsimony a composite religious identity score was computed by calculating the mean of each participant's regard and centrality scores. Cronbach's  $\alpha$  was .96 for the composite religious identity scale.

**Religious participation.** Participants responded to two items previously used to measure religious participation in American adolescents and young adults, (Chan et al., 2014; Lopez et al., 2011): "In the past 12 months, how often did you attend religious services?" and, "In the past 12 months, how often did you attend any other special activities (for example, social group, choir, bible class) as part of your religion or faith?" Frequency of participation in each of these activities was coded using a scale ranging from 0 to 4 (0 = *Never*, 1 = *A Few Times a Year*, 2 = *Once a Month*, 3 = *Once a Week*, 4 = *More than Once a Week*). Given that these two items were significantly positively correlated,  $r(32) = .71, p < .001$ , the items were averaged to obtain an overall religious participation score. Higher scores indicating a higher level of religious participation.



**Spirituality.** Spirituality was measured using the four-item spirituality subscale of the Spiritual Transcendence Index (Seidlitz et al., 2002). Examples of items in the spirituality subscale include, “Maintaining my spirituality is a priority for me,” and, “My spirituality gives me a feeling of fulfillment.” Participants indicated their agreement with each item using a scale ranging from 0 = *Strongly Disagree* to 6 = *Strongly Agree*. Higher scores indicate higher levels of spirituality (Cronbach’s  $\alpha = .95$ ).

**Congregational support.** Participants completed the seven-item congregational support subscale of the Religious Support Scale (Fiala et al., 2002) as a measure of religious social support. Sample items include, “Others in my congregation care about my life and situation” and “Others in my congregation give me the sense that I belong.” Possible responses range from 0 = *Strongly Disagree* to 4 = *Strongly Agree*. One item is reverse-scored, and higher scores reflect greater perceived congregational support. Participants who indicated that they do not belong to a religious community were not asked to complete the congregational support scale (Cronbach’s  $\alpha = .92$ ).

**Social support.** Participants completed the four-item family and friend support subscales of the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). The family support subscale includes items such as, “I can talk about my problems with my family,” and “My family is willing to help me make decisions.” Items in the friend support subscale include, “My friends really try to help me,” and “I can talk about my problems with my friends.” Possible responses range from 0 = *Very Strongly Disagree* to 6 = *Very Strongly Agree*, with higher scores indicating

greater perceived support from a particular group. Cronbach's  $\alpha$  was .80 for family support and .85 for friend support.

**Depressive symptoms.** The Center for Epidemiological Studies Depression-10 (Andreson, Malmgren, Carter, & Patrick, 1994) is a 10-item measure of depressive symptoms. Participants indicated how often they experienced a series of depressive symptoms in the past week by responding to items such as, "I felt fearful" and "I could not 'get going'." Possible responses range from 0 = *Rarely or None of the Time (less than 1 day)* to 3 = *All of the Time (5-7 days)*, with higher scores indicating more symptoms of depression. Two items are reverse scored (Cronbach's  $\alpha = .90$ ).

**Satisfaction with life.** Participants completed Diener, Emmons, Larson, and Griffin's (1985) Satisfaction with Life Scale as a measure of life satisfaction. This is a five-item measure to which participants responded by identifying their level of agreement with statements such as, "I am satisfied with my life" and "In most ways my life is close to ideal." Possible responses range from 0 = *Strongly Disagree* to 6 = *Strongly Agree*, and higher scores indicate greater satisfaction with life (Cronbach's  $\alpha = .90$ ).

**Positive and negative affect.** A 12-item scale by Mroczek and Kolarz (1998) was used to measure positive and negative affect. Participants indicated how often they experienced one of 12 emotions in the past 30 days, with possible responses ranging from 0 = *Not at All* to 4 = *Almost all the Time*. The scale consists of two six-item subscales, one for positive emotions (e.g., cheerful, full of life, calm and peaceful), and one for negative emotions (e.g., restless or fidgety, worthless, nervous). Higher scores on a given

subscale indicate higher levels of either positive or negative affect. Cronbach's  $\alpha$  was .95 for positive affect and .80 for negative affect.

## RESULTS

### Descriptive Statistics and Zero-Order Correlations

Means, standard deviations, and zero-order correlations are presented in Tables 4 and 5. Given the large number of statistical tests conducted, a stringent criteria of  $p < .01$  was set as the threshold for significance to correct for the possibility of Type I error. Significant results at the .05 level are marked with an asterisk for reference in the relevant tables as seen in Table 4, mean scores on measures of autism symptom severity and child problem behavior were fairly moderate, as were mean scores for maternal positive affect, negative affect, and life satisfaction. Mean scores for maternal depressive symptoms and parental stress were somewhat low, indicating that overall mothers did not report high levels of depressive symptoms or stress. Although scores for religious participation and positive and negative religious coping tended to be low, participants reported moderate to high levels of spirituality, congregational support, and social support from family and friends. Independent samples  $t$ -tests revealed no significant differences in well-being, social support, or religiosity (in the interest of parsimony positive and negative religious coping scores were aggregated for the purposes of these  $t$ -tests by computing a mean religious coping score) based on whether mothers were married or unmarried ( $t_{\text{range}} = -1.90$  to  $1.06$ , n.s.), or based on whether mothers identified as Caucasian or as members of other ethnic groups ( $t_{\text{range}} = -1.61$  to  $1.84$ , n.s.). However, although independent samples  $t$ -tests examining differences in religiosity and well-being based on whether mothers reported a religious affiliation revealed no significant differences in well-being ( $t_{\text{range}} = -1.35$  to  $.57$ , n.s.) they revealed several differences in religiosity. Specifically,

mothers affiliated with a specific religion reported significantly higher levels of religious participation ( $M = 1.38, SD = 1.19$ ) than unaffiliated mothers ( $M = .14, SD = .31$ ),  $t(22.45) = -4.42, p < .001$ . Additionally, affiliated mothers ( $M = 2.82, SD = .89$ ) reported significantly higher levels of religious identity than unaffiliated mothers ( $M = 1.19, SD = .77$ ),  $t(28.25) = -5.57, p < .001$ , and significantly higher mean religious coping scores ( $M = 6.3, SD = 3.94$ ) than unaffiliated mothers ( $M = 2.00, SD = 2.54$ ),  $t(31.86) = -3.87, p = .001$ .

Examination of the zero-order correlations indicated that, of the demographic variables included in the present study, mother and child characteristics such as mother's age, mother's education, family income, child age, whether the child receives special services at school, and child autism severity were not significantly correlated with maternal well-being. Due to the lack of significant associations with psychological well-being outcomes, these variables were not included in the regression models.

In light of research linking child problem behavior to parental stress (Dumas et al., 1991), items pertaining to the frequency with which a child engages in various problem behaviors were examined, and these variables appeared to be fairly consistently associated with psychological well-being. Specifically, self-injurious behavior was positively correlated with negative affect,  $r(31) = .41, p = .017$ , and depressive symptoms,  $r(31) = .25, p = .045$ , as was aggressive behavior,  $r(32) = .42, p = .015$  for negative affect,  $r(32) = .36, p = .04$  for depressive symptoms). Furthermore, frequency of disruptive behavior, such as throwing or destroying objects, was also positively correlated with negative affect,  $r(32) = .44, p = .01$ , and depressive symptoms,  $r(32) =$

Table 4  
Means and Standard Deviations

Variable	Mean	SD
Mother's Age	39.60	8.16
Child Age	7.94	4.40
Social Impairment (0-2)	1.41	.56
Eye Contact (0-2)	1.03	.58
Emotional Impairment (0-2)	1.47	.62
Cognitive Impairment (0-2)	1.03	.72
Repetitive Behavior (0-2)	1.06	.74
Repetitive Verbal Behavior (0-2)	1.03	.72
Child Behavior with Mother (0-2)	.97	.63
Child Behavior in Public (0-2)	1.21	.64
Child Behavior with Family (0-2)	.97	.72
Child Behavior at School (0-2)	.91	.51
Self-Injury (0-4)	1.36	1.41
Aggressive Behavior (0-4)	1.24	1.48
Disruptive Behavior (0-4)	1.41	1.54
Elopement (0-4)	.76	1.16
Positive Affect (0-4)	1.75	.93
Negative Affect (0-4)	1.63	.79
Depressive Symptoms (0-3)	1.33	.69
Life Satisfaction (0-6)	2.72	1.52
Stress (0-4; 18-90 for total score)	27.55	10.55
Religious Participation (0-4)	.87	1.11
Congregation Support (0-4)	2.66	.92
Positive Religious Coping (0-3; 0-21)	4.97	4.39
Negative Religious Coping (0-3; 0-21)	4.09	3.81
Spirituality (0-5)	3.02	1.53
Religious Identity (0-4)	2.18	1.16
Family Social Support (0-6)	3.44	1.39
Friend Social Support (0-6)	3.51	1.46

.39,  $p = .024$ . Elopement behavior, such as wandering away from a parent or the child's home, was positively correlated with negative affect,  $r(32) = .42, p = .013$  and depressive symptoms,  $r(32) = .43, p = .01$  and negatively correlated with positive affect,  $r(32) = -.43, p = .011$ .

As seen in Table 5, aggressive, disruptive, and self-injurious behaviors were each positively correlated, although not always to a significant degree when applying the more stringent criteria of  $p < .01$ . Furthermore, their relationships with elopement, although not significant, were positive. Therefore, in the interest of parsimony, a combined measure of child problem behavior was computed by calculating the mean child problem behavior score reported by each participant, and this aggregated variable was entered as a covariate in subsequent regression analyses. Cronbach's  $\alpha$  was .77 for the combined measure of child problem behavior.

Consistent with the hypothesized model, parental stress was significantly negatively correlated with positive affect,  $r(31) = -.65, p < .001$ , and satisfaction with life,  $r(31) = -.58, p < .001$ , and significantly positively correlated with negative affect  $r(31) = .57, p = .001$ , and depressive symptoms,  $r(31) = .65, p < .001$ . However, as illustrated in Table 5, although religious participation, religious identity, and positive and negative religious coping were all positively correlated, neither these variables nor congregational support were significantly associated with any well-being outcomes. Of the religiosity variables, spirituality alone was significantly negatively correlated with negative affect,  $r(31) = -.50, p = .003$ . Likewise, family support and friend support were each significantly positively correlated with satisfaction with life ( $r = .59$  and  $.64$ ,

respectively,  $p < .001$ ). Of note, participants did not appear to be highly involved in organized religion, as rates of religious participation were quite low ( $M = .87$ ,  $SD = 1.11$ ). Indeed, the mode for religious participation and both positive and negative religious coping was zero.

### **The Relationship Between Stress and Psychological Well-Being**

A series of hierarchical regression analyses were conducted to examine the relationship between parental stress and each well-being outcome while controlling for child problem behavior. For each well-being outcome, a two-step hierarchical regression was conducted with child problem behavior entered as a predictor in step 1 and parental stress entered as an additional predictor in step 2. The results of these analyses are presented in Table 6. Notably, parental stress was positively and significantly associated with depressive symptoms,  $\beta = .54$ ,  $SE = .01$ ,  $p = .001$ ,  $R^2 = .463$ , over and above child problem behavior, and significantly negatively associated with satisfaction with life,  $\beta = -.57$ ,  $SE = .02$ ,  $p = .002$ ,  $R^2 = .331$ , and positive affect,  $\beta = -.59$ ,  $SE = .01$ ,  $p = .001$ ,  $R^2 = .431$ , over and above child problem behavior. Thus, parental stress significantly predicted most well-being outcomes even when accounting for child problem behavior.

### **Religiosity and Social Support as Predictors of Well-Being**

As presented in Table 7, an additional series of hierarchical regression analyses explored the associations between religious participation, congregational support, positive and negative religious coping, religious identity, social support from family and friends, and psychological well-being among mothers of children with autism while controlling for child problem behavior. For each well-being outcome, a two-step



hierarchical regression analysis was conducted with child problem behavior entered as a predictor in step 1 and the religiosity or social support variable entered as an additional predictor in step 2. This process was repeated such that every religiosity and social support variable was tested as a predictor of every well-being outcome.

**Depressive symptoms.** Using a conservative p-value of .01, no religiosity or social support variable was significantly associated with depressive symptoms over and above child problem behavior.

**Satisfaction with life.** Family support,  $\beta = .57$ ,  $SE = .17$ ,  $p = .001$ ,  $R^2 = .349$ , and friend support,  $\beta = .62$ ,  $SE = .15$ ,  $p < .001$ ,  $R^2 = .404$ , were each significantly positively associated with life satisfaction while controlling for child problem behavior. No other religiosity or social support variable was significantly associated with satisfaction with life over and above child problem behavior.

**Positive affect.** No religiosity or social support variable was significantly associated with positive affect over and above child problem behavior.

**Negative affect.** No religiosity or social support variable was significantly associated with positive affect over and above child problem behavior.

### **Religiosity and Social Support as Potential Moderators of the Relationship Between Stress and Well-Being**

A series of three-step hierarchical regression analyses was conducted to determine if any religiosity or social support variables moderated the relationship between stress and psychological well-being among mothers of children with autism. Child problem behavior was entered in step 1 as a demographic control, followed by the entry of parental stress and the religiosity or social support variable of interest in step 2, and a

product term designed to capture the interaction between stress and the religiosity or social support variable in step 3. This process was repeated such that every religiosity and social support variable was tested as a potential moderator of the association between stress and each well-being outcome while controlling for child problem behavior. As seen in Table 8, no religiosity or social support variable significantly moderated the association between parental stress and any well-being outcome, although stress emerged as a significant predictor of well-being in some of the models examined.

### **Post-Hoc Analyses**

To explore the possibility that more parsimonious analyses could further clarify these results, additional analyses were conducted in which family and friend social support were aggregated into a total support measure by computing mean social support scores. Positive and negative religious coping were similarly aggregated into a mean religious coping score given the strong positive correlation between the religious coping subscales,  $r(31) = .95, p < .001$ . However, aggregating and analyzing these composite variables did not produce results different from those obtained from examining the components of the aggregates separately.

## DISCUSSION

Religion and spirituality may function as key resources for mothers seeking ways to manage stress associated with raising a child with autism. The present study sought to test a theoretical model (see Figure 2) integrating previous conceptualizations of parent well-being (Manning et al., 2011; Resch et al., 2012) and religious coping (Pargament, 1997) in order to more fully understand the role of religion as a coping resource among mothers of children with autism. As illustrated in Figure 2, the proposed model predicted that parental stress and religiosity would independently predict maternal well-being. Furthermore, various religiosity variables, including religious coping, religious participation, religious identity, spirituality, and congregational support, were expected to moderate the relationship between parental stress and well-being. Social support from family members and friends was also examined as a potential predictor of well-being and moderator of the relationship between stress and well-being. Although results indicated that parental stress is a fairly consistent predictor of well-being, the other associations proposed by the model were not supported.

### **Parental Stress, Religiosity, and Social Support**

As hypothesized, parental stress was a significant predictor of depressive symptoms, satisfaction with life, and positive affect over and above child problem behavior. Specifically, stress was positively associated with depressive symptoms, and negatively associated with satisfaction with life and positive affect. Interestingly, stress was not associated with negative affect over and above child problem behavior. In light

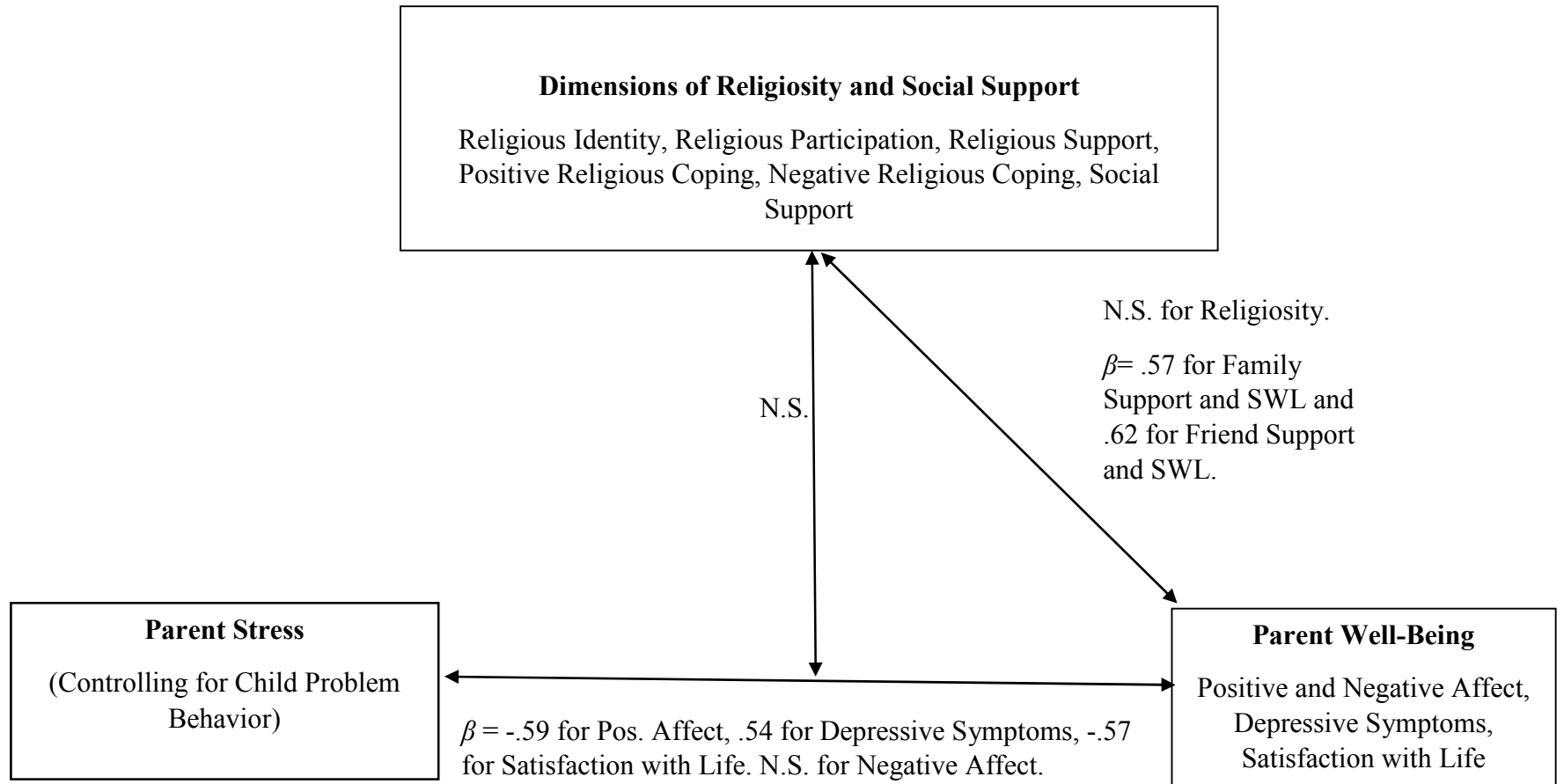


Figure 2. Model illustrating the results of testing the hypothesized relationships.

of the clear association between parental stress and psychological well-being, as well as the many stressors mothers of children with autism face (Serrata, 2012), research and interventions designed to mitigate parenting stress are needed. Mothers in particular may experience additional stressors beyond those experienced by fathers, as some evidence suggests that mothers may spend more time with their children than fathers (Konstantareas & Homatides, 1992). As a result of this increased time spent with children as compared to fathers, mothers may be more actively involved on a day-to-day basis in addressing issues related to their child with autism's behavior, healthcare, educational needs, etc. Furthermore, research by Hartley and Schultz (2015) suggests that perceived stressors related to raising a child with autism may vary somewhat between mothers and fathers. Whereas mothers and fathers both identified concerns related to interactions with relevant professionals, family functioning, the child's future, and the child's social abilities, fathers uniquely identified concerns regarding having time to rest and recuperate, whereas mother uniquely emphasized stressors related to the child's care. Although no intervention can eliminate parenting stressors, it is important to provide mothers of children with autism with appropriate tools that consider the unique stressors they face in order to support their well-being. It is also important for future research to better explore and understand potential differences in parenting stress and stress management across mothers and fathers.

No religiosity variable was significantly associated with well-being outcomes when controlling for child problem behavior. This finding raises important questions concerning the role of religion and spirituality as coping strategies used by mothers of

children with autism and by the participants in the present study specifically. The absence of significant relationships with well-being for religiosity variables is surprising in light of prior work suggesting that religious coping may be related to certain well-being outcomes among parents of children with autism (Tarakeshwar & Pargament, 2001). Still, few researchers have examined relationships between religion and spirituality and the specific well-being outcomes measured in the present study. One exception is the work of Ekas et al. (2009), who reported results somewhat consistent with those presented here indicating that, although spirituality and religious beliefs were significantly associated with well-being outcomes, religious activities were actually inversely associated with several well-being measures among mothers of children with autism. Further research is needed to clarify the effectiveness of specific religious beliefs and practices, as well as a more general spirituality, as coping strategies for mothers of children with autism.

One explanation for the lack of significant associations between religious participation, religious identity, positive and negative religious coping, spirituality, and well-being concerns the religious behavior of the sample examined. Although I recruited in part from one church group for individuals with special needs, mothers were recruited from local and national agencies that provide resources for children with autism, and not specifically from religious organizations. A majority of participants reported a total score of zero for religious participation, positive religious coping, and negative religious coping, thereby indicating that they do not engage in any of the behaviors measured by these scales. Furthermore, 28 participants either indicated that they did not belong to a

religious congregation or declined to provide this information, and 21 participants indicated that they were unaffiliated with a particular religion or declined to provide this information. As might be expected, independent samples *t*-tests indicated that mothers who reported a religious affiliation reported significantly higher levels of religious coping, religious participation, and religious identity than unaffiliated mothers. Still, affiliating with a specific religion does not necessarily mean that one is consistently and actively engaged with one's religious beliefs, and such engagement could be difficult depending on the degree of support offered for families of children with autism within a given religious community. As such, coping strategies involving religion and spirituality may have been more or less relevant to the mothers in the sample depending on how involved each individual was with her reported religious affiliation.

These results are interesting in light of research exploring gender differences in religiosity. The sample recruited was primarily Christian. Schnabel (2015) reports that American Christian women score more highly than men on several religiosity measures, and research with a Danish sample offers additional support for the existence of this gender difference in religiosity (Hvidtjorn, Hjelmburg, Skytthe, Christensen, & Hvidt, 2014). Still, Hvidtjorn and colleagues also report that men were more likely to use religious coping than women, although both groups tended to report low levels of religious coping. The development of a more thorough understanding of religiosity among women, especially among mothers of children with autism, is necessary in order to clarify these issues.

Turning to the social support variables examined, friend support and family support were significantly positively associated with satisfaction with life, but were not associated with any other well-being variable over and above child problem behavior. This finding is somewhat surprising in light of previous research indicating that social support is a commonly used coping strategy by parents of children with autism (Luther et al., 2005) and may be linked to well-being outcomes such as depression (Lovell et al., 2012). Ultimately, child problem behavior may have been a stronger predictor of the well-being outcomes examined than was social support from family or friends, although additional research should further explore the role of various forms of social support in promoting well-being among mothers raising a child with autism.

#### **Lack of Moderation Effects**

The predicted role of religiosity and social support as moderators of the relationship between stress and well-being was not supported. A key purpose of the present study was to examine Pargament's (1997) assertion that religious coping may act as a moderator of the relationship between stress and well-being by exploring this possibility in the context of mothers of children with autism specifically. To review, the religious stress moderator model holds that high religious coping is associated with better outcomes than low religious coping under high levels of stress. The religious stress deterrent model proposes that high religious coping is associated with superior outcomes to low regardless of stress level, and the combined religious moderator-deterrent model suggests that high religious coping is always associated with better outcomes than low, and this effect is more pronounced under higher levels of stress (Pargament, 1997).



Much of the previous literature exploring this topic seems to offer some support for the religious stress deterrent model when describing parents of children with developmental disabilities. Tarakeshwar and Pargament (2001) found that positive religious coping was associated with well-being outcomes in parents of children with autism, and Weyand et al. (2013) concluded that sanctification of parenting seemed to protect parents from stress associated with child behavior problems. Still, the ability of these studies to support the religious stress deterrent model in parents of children with autism is limited. Only Tarakeshwar and Pargament (2001) addressed autism directly, and only Weyand et al. (2013) directly measured stress. Whereas Weyand and colleagues recruited from some churches, like the present research neither study explicitly targeted religious organizations for recruitment.

Although some support appears to exist for the religious stress deterrent model, other work suggests that religious coping may not be a deterrent or may actually be associated with harmful outcomes. Weisner et al. (1991) found that religious families of a child with a developmental disability showed no difference in peace of mind or emotional adjustment compared to nonreligious families. Additionally, Gallagher et al. (2015) linked spirituality to greater depression in a sample of parents raising a child with a developmental disability, although it is important to note that Gallagher and colleagues did not distinguish between positive and negative religious coping. The variety of operational definitions of religious coping present in the literature may account for these inconsistent results, and the present study sought to examine models of religious coping among mothers of children with autism through a more unified theoretical framework.

Further complicating our understanding of religious coping, in contrast to the moderation models proposed by Pargament (1997), neither positive religious coping nor negative religious coping were predictive of any well-being outcome or acted as moderators of the association between stress and well-being. As discussed above, this may be related to the relatively low rates of religious participation reported by the mothers in the study, or may indicate that much of the variance in well-being is explained by child problem behavior and parental stress. Indeed, one key finding is that 33.1 to 46.3% of the variance in maternal well-being was accounted for by stress and child problem behavior alone. It could be that religiosity, while important to many families, offers little predictive power above and beyond these variables. Additional research is needed to further clarify the nature of religious coping among mothers of children with autism.

### **Limitations and Future Directions**

The present study was limited somewhat by the nature of the sample employed. A relatively small sample of 41 participants was recruited, which was likely a result of time constraints as well as the difficulty of contacting mothers of children with autism in the community and in persuading mothers of children with unique needs to take time out of their schedules to complete a survey. Future research examining religious coping and well-being among mothers of children with autism should recruit as large a sample as possible to increase statistical power, as spirituality was a significant predictor of some well-being outcomes at the  $p < .05$  level, but not at the more stringent criteria of  $p < .01$  used to correct for the possibility of Type I error. Also of note, a lack of participation in

organized religion by the sample may have influenced results, as more religious families may be likely to engage in religious coping to a greater extent than less religious families (Weisner et al., 1991). Research comparing a religious sample recruited from individuals active in local religious communities with a sample of participants who participate less frequently in religious activities could better evaluate how religious coping functions among individuals who rely on religion to various degrees. Additional studies exploring the relationship between stress, religion, and well-being among fathers of children with autism would also contribute to the development of a more comprehensive understanding of these topics.

### **Conclusions**

Consideration of the associations among stress, religiosity, social support, and well-being in the present study suggests that, for some mothers of children with autism, religious coping strategies may not be highly relevant as tools to manage stress. Still, additional research with a larger sample more varied in its religious beliefs and practices is needed. Furthermore, given that parental stress and child problem behavior seemed to capture a notable portion of the variance in well-being in many of the models examined, interventions designed to reduce child problem-behavior (e.g., applied behavior analysis) and/or help parents manage stress should be especially conducive to maternal well-being.

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**APPENDIX A**

Table 5  
Zero-Order Correlations

Variable	1	2	3	4	5	6	7	8	9
1. Mother's Age	—								
2. Mother's Education	.470**								
3. Family Income	.330*	.400*							
4. More than 1 with ASD	.080	.220	.060						
5. Child Gender	.050	.410*	.260	-.270					
6. Child Age	.620**	.200	.290	-.120	-.020				
7. School Services	.090	-.004	-.020	.150	-.010	-.160			
8. Social Impairment	-.120	.120	.080	.060	-.150	-.090	.310		
9. Eye Contact	-.190	-.040	-.250	.140	-.230	.000	.170	.240	
10. Emotional Impairment	.120	-.003	-.310	.170	-.090	.220	.190	.300	.390*
11. Cognitive Impairment	.340*	.280	-.100	-.020	-.080	.320	.250	.200	-.080
12. Repetitive Behavior	-.040	-.050	-.200	.100	-.060	.100	.260	.380*	.350*
13. Repetitive Verbal	-.030	.150	-.150	.240	-.080	-.120	.250	.500**	.290
14. Behavior with Mother	.110	.010	-.260	.170	-.140	.040	.120	.120	.420*
15. Public Behavior	.000	-.260	-.090	.320	-.410*	-.060	.270	.180	.150
16. Family Behavior	.080	-.050	-.320	.400*	-.230	.130	.220	.110	.590**
17. School Behavior	.240	.120	.120	.060	.200	.220	.260	.130	.210

Variable	1	2	3	4	5	6	7	8	9
18. Self-Injury	.070	.010	.040	.300	.070	.000	.290	.080	.060
19. Aggressive Behavior	-.170	-.320	-.290	.250	-.170	-.110	.300	-.160	.210
20. Disruptive Behavior	-.050	-.280	.300	.080	-.010	-.190	.280	-.310	-.050
21. Elopement	-.180	-.100	.330	.320	-.110	-.250	.060	.110	-.080
22. Positive Affect	-.030	-.050	.140	-.030	-.070	.230	-.140	.160	.120
23. Negative Affect	.470**	-.180	-.230	.040	-.070	-.220	.160	-.080	-.110
24. Depression Symptoms	.330*	-.050	-.230	.130	-.100	-.100	.170	-.230	-.010
25. Life Satisfaction	-.090	-.130	.170	.120	.030	.030	.001	.150	.220
26. Stress	.170	.010	.050	.380*	.050	.050	.250	.080	-.020
27. Religious Participation	.060	.360*	.100	.380*	-.010	-.010	.060	.340	.050
28. Congregational Support	-.040	-.130	-.100	.340	-.330	-.330	.110	-.180	-.150
29. Positive Religious Coping	.040	.330	.210	.200	-.200	-.200	.230	.320	-.040
30. Negative Religious Coping	.060	.260	.220	.140	-.160	-.160	.210	.370*	-.130
31. Spirituality	.170	.350*	.200	.240	.080	.080	-.070	.150	.090
32. Religious Identity	.170	.250	.060	.260	.090	.090	-.040	.380*	.270
33. Family Social Support	-.080	-.040	.050	-.290	.060	.060	-.120	-.020	.150
34. Friend Social Support	-.140	-.010	.070	-.130	-.030	-.030	-.230	.090	.230

\* $p < .05$  \*\*  $p < .01$

	Variable	10	11	12	13	14	15	16	17	18
	1. Mother's Age	—								
	2. Mother's Education	—								
	3. Family Income	—								
	4. More than 1 with ASD	—								
	5. Child Gender	—								
	6. Child Age	—								
	7. School Services	—								
	8. Social Impairment	—								
∞	9. Eye Contact	—								
	10. Emotional Impairment	—								
	11. Cognitive Impairment	.310	—							
	12. Repetitive Behavior	.740**	.280	—						
	13. Repetitive Verbal	.310	.350*	.400*	—					
	14. Behavior with Mother	.510**	.070	.460**	.470**	—				
	15. Public Behavior	.520**	.050	.360*	.120	.320	—			
	16. Family Behavior	.580**	.180	.520**	.180	.610**	.410*	—		
	17. School Behavior	.610**	.010	.490**	.170	.370*	.420*	.320	—	

Variable	10	11	12	13	14	15	16	17	18
18. Self-Injury	.420*	.290	.390*	-.010	.290	.380*	.430*	.390*	
19. Aggressive Behavior	.440**	.140	.490**	.020	.270	.490**	.580*	.310	.650**
20. Disruptive Behavior	.270	.150	.380*	-.040	.260	.280	.400*	.280	.530**
21. Elopement	-.010	-.360*	.050	.230	.200	.310	-.120	.170	.240
22. Positive Affect	-.010	-.004	.050	-.230	-.170	-.230	.120	-.210	-.270
23. Negative Affect	.210	-.070	.170	-.030	.220	.470**	.120	.300	.410*
24. Depression Symptoms	.160	-.040	.070	.080	.240	.370*	.050	.250	.350*
25. Life Satisfaction	.010	.020	.070	-.060	-.080	-.110	.070	-.110	-.150
26. Stress	.300	.030	.200	.240	.400*	.540**	.240	.360*	.300
27. Religious Participation	.050	.230	.070	.350*	.020	-.170	-.120	-.050	.020
28. Congregational Support	-.300	.270	-.300	.240	-.160	-.320	-.090	-.420	.180
29. Positive Religious Coping	.110	.160	-.070	-.030	-.070	.120	-.090	.110	.240
30. Negative Religious Coping	.100	.140	-.080	-.020	-.010	.240	-.100	.140	.200
31. Spirituality	-.080	-.010	-.220	-.090	-.110	-.250	-.120	-.070	-.010
32. Religious Identity	.140	.120	-.020	.210	-.030	-.060	-.080	.040	-.110
33. Family Social Support	-.220	-.130	-.260	-.240	-.220	-.340*	-.340	-.290	-.220
34. Friend Social Support	-.180	-.190	-.160	-.080	-.120	-.270	-.310	-.280	-.260

\* $p < .05$  \*\*  $p < .01$



Variable	19	20	21	22	23	24	25	26	27
18. Self-Injury	—								
19. Aggressive Behavior	—								
20. Disruptive Behavior	.820**	—							
21. Elopement	.190	.090	—						
22. Positive Affect	-.210	-.330	-.430*	—					
23. Negative Affect	.420*	.440**	.420*	-.670**	—				
24. Depression Symptoms	.360*	.390*	.430*	-.840**	.860**	—			
25. Life Satisfaction	-.130	-.260	-.210	.730**	-.510**	-.600**	—		
26. Stress	.310	.350*	.480**	-.650**	.570**	.650**	-.580**	—	
27. Religious Participation	-.200	-.310	.060	.030	-.220	-.080	.140	.060	—
28. Congregational Support	.080	-.020	.140	-.030	-.390	-.260	.230	-.220	.540
29. Positive Religious Coping	.030	-.040	-.040	-.040	-.030	-.020	.010	.160	.520**
30. Negative Religious Coping	-.020	-.060	-.002	-.050	.070	.020	-.070	.220	.430*
31. Spirituality	-.290	-.390*	-.280	.430*	-.500**	-.460**	.380*	-.270	.600**
32. Religious Identity	-.290	-.430*	-.160	.200	-.290	-.190	.300	-.020	.680**
33. Family Social Support	-.280	-.340*	-.140	.410*	-.410*	-.320	.590**	-.620**	.100
34. Friend Social Support	-.280	-.400*	.020	.390*	-.440**	-.310	.640**	-.540**	.270

\* $p < .05$  \*\*  $p < .01$

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Variable	28	29	30	31	32	33	34
1. Mother's Age	—						
2. Mother's Education	—						
3. Family Income	—						
4. More than 1 with ASD	—						
5. Child Gender	—						
6. Child Age	—						
7. School Services	—						
8. Social Impairment	—						
9. Eye Contact	—						
10. Emotional Impairment	—						
11. Cognitive Impairment	—						
12. Repetitive Behavior	—						
13. Repetitive Verbal	—						
14. Behavior with Mother	—						
15. Public Behavior	—						
16. Family Behavior	—						
17. School Behavior	—						

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Variable	28	29	30	31	32	33	34
18. Self-Injury	—						
19. Aggressive Behavior	—						
20. Disruptive Behavior	—						
21. Elopement	—						
22. Positive Affect	—						
23. Negative Affect	—						
24. Depression Symptoms	—						
25. Life Satisfaction	—						
26. Stress	—						
27. Religious Participation	—						
28. Congregational Support	—						
29. Positive Religious Coping	.030	—					
30. Negative Religious Coping	-.280	.950**	—				
31. Spirituality	.510	.590**	.450**	—			
32. Religious Identity	.230	.580**	.490**	.780**	—		
33. Family Social Support	-.120	-.020	-.090	.400*	.340	—	
34. Friend Social Support	.070	.060	-.020	.410*	.420*	.890**	—

\* $p < .05$  \*\*  $p < .01$

Table 6  
Stress and Psychological Well-Being

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Depressive Symptoms</b>						
Model 1				0.232		
Constant	0.950***	0.160				
Problem Behavior						
Model 2				0.463	0.231	12.920*
Constant						
Problem Behavior	0.160	0.260	0.160	0.100	0.240	
Stress	0.040**	0.100	0.540			
<b>Satisfaction with Life</b>						
Model 1				0.074		
Constant	3.130***	0.390				
Problem Behavior	-0.390	0.250	-0.270			
Model 2				0.331	0.258	11.560**
Constant	4.970***	0.640				
Problem Behavior	-0.020	0.240	-0.020			
Stress	-0.080**	0.020	-0.570			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>PA</b>						
Model 1				0.151		
Constant	2.160***	0.230				
Problem Behavior	-0.340*	0.150	-0.390			
Model 2				0.431	0.279	14.720**
Constant	3.340***	0.360				
Problem Behavior	-0.110	0.140	-0.120			
Stress	-0.050**	0.010	-0.590			
<b>NA</b>						
Model 1				0.297		
Constant	1.150***	0.180				
Problem Behavior	0.410**	0.110	0.550			
Model 2				0.426	0.129	6.740*
Constant	0.460	0.310				
Problem Behavior	0.270*	0.120	0.360			
Stress	0.03*	0.010	0.400			

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 7  
 Religion, Social Support, and Psychological Well-Being

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Dep. and Religious Part.</b>						
Model 1				0.240		
Constant	0.950***	0.160				
Prob. Behavior	0.320**	0.100	0.490			
Model 2				0.240	0.000	0.001
Constant	0.96***	0.190				
Prob. Behavior	0.32**	0.100	0.490			
Rel. Part.	-0.003	0.100	-0.010			
<b>Dep. and Cong. Support</b>						
Model 1				0.004		
Constant	1.280**	0.290				
Prob. Behavior	0.060	0.250	0.070			
Model 2				0.080	0.075	0.820
Constant	1.770*	0.610				
Prob. Behavior	0.090	0.260	0.110			
Cong. Support	-0.190	0.210	-0.280			
<b>Dep. and Pos. Rel. Coping</b>						
Model 1				0.230		
Constant	0.990***	0.160				
Prob. Behavior	0.310**	0.100	0.480			
Model 2				0.233	0.003	0.120
Constant	1.030***	0.200				
Prob. Behavior	0.310*	0.100	0.480			
Pos. Rel. Coping	-0.010	0.030	-0.060			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Dep. and Negative Religious Coping</b>						
Model 1				0.240		
Constant	0.950***	0.160				
Prob. Behavior	0.320**	0.100	0.490			
Model 2				0.240	0.000	0.000
Constant	0.950***	0.200				
Prob. Behavior	0.320**	0.100	0.490			
Negative Religious Coping	0.000	0.030	-0.001			
<b>Dep. and Spirituality</b>						
Model 1				0.211		
Constant	1.010***	0.160				
Prob. Behavior	0.290**	0.100	0.460			
Model 2				0.316	0.105	4.600*
Constant	1.550***	0.290				
Prob. Behavior	0.220*	0.100	0.350			
Spirituality	-0.150*	0.070	-0.340			
<b>Dep. and Religious Identity</b>						
Model 1				0.211		
Constant	1.010***	0.160				
Prob. Behavior	0.290**	0.100	0.460			
Model 2				0.213	0.001	0.050
Constant	1.070**	0.310				
Prob. Behavior	0.280*	0.110	0.450			
Religious Identity	-0.020	0.100	-0.040			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Dep. and Family Support</b>						
Model 1				0.240		
Constant	0.950***	0.160				
Prob. Behavior	0.320**	0.100	0.490			
Model 2				0.268	0.028	1.180
Constant	1.300**	0.360				
Prob. Behavior	0.280*	0.110	0.430			
Family Support	-0.090	0.080	-0.180			
<b>Dep. and Friend Support</b>						
Model 1				0.240		
Constant	0.950***	0.160				
Prob. Behavior	0.320**	0.100	0.490			
Model 2				0.265	0.025	1.060
Constant	1.270**	0.350				
Prob. Behavior	0.280*	0.110	0.440			
Friend Support	-0.080	0.080	-0.170			
<b>Satisfaction with Life and Rel. Part.</b>						
Model 1				0.059		
Constant	3.140***	0.390				
Prob. Behavior	-0.350	0.250	-0.240			
Model 2				0.069	0.011	0.358
Constant	2.980***	0.470				
Prob. Behavior	-0.320	0.250	-0.230			
Rel. Part.	0.140	0.240	0.110			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Satisfaction with Life and Congregational Support</b>						
Model 1				0.104		
Constant	2.960***	0.570				
Prob. Behavior	0.550	0.490	0.320			
Model 2				0.137	0.033	0.380
Constant	2.300	1.210				
Prob. Behavior	0.510	0.510	0.300			
Congregational Support	0.260	0.430	0.180			
<b>Satisfaction with Life and Positive Religious Coping</b>						
Model 1				0.060		
Constant	3.160***	0.400				
Prob. Behavior	-0.350	0.250	-0.250			
Model 2				0.061	0.001	0.020
Constant	3.120***	0.500				
Prob. Behavior	-0.360	0.260	-0.250			
Pos. Religious coping	0.010	0.060	0.030			
<b>Satisfaction with Life and Negative Religious coping</b>						
Model 1				0.059		
Constant	3.140***	0.390				
Prob. Behavior	-0.350	0.250	-0.240			
Model 2				0.062	0.004	0.123
Constant	3.230***	0.480				
Prob. Behavior	-0.340	0.250	-0.240			
Neg. Religious coping	-0.020	0.070	-0.060			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Satisfaction with Life and Spirituality</b>						
Model 1				0.034		
Constant	2.930***	0.390				
Prob. Behavior	-0.250	0.240	-0.180			
Model 2				0.146	0.112	3.930
Constant	1.740*	0.700				
Prob. Behavior	-0.090	0.240	-0.070			
Spirituality	0.330	0.170	0.350			
<b>Satisfaction with Life and Religious Identity</b>						
Model 1				0.034		
Constant	2.930***	0.390				
Prob. Behavior	-0.250	0.240	-0.180			
Model 2				0.099	0.066	2.180
Constant	2.050**	0.710				
Prob. Behavior	-0.130	0.250	-0.090			
Religious Identity	0.340	0.230	0.270			
<b>Satisfaction with Life and Family Support</b>						
Model 1				0.059		
Constant	3.140***	0.390				
Prob. Behavior	-0.350	0.250	-0.240			
Model 2				0.349	0.291	13.840**
Constant	0.650	0.750				
Prob. Behavior	-0.070	0.220	-0.050			
Family Support	0.630**	0.170	0.570			



Variable	<i>B</i>	<i>SE</i>	$\beta$	$R^2$	$R^2$ Change	$F$ for $R^2$ Change
<b>Satisfaction with Life and Friend Support</b>						
Model 1				0.059		
Constant	3.140***	0.390				
Prob. Behavior	-0.350	0.250	-0.240			
Model 2				0.404	0.346	18.000***
Constant	0.510	0.700				
Prob. Behavior	-0.060	0.210	-0.040			
Friend Support	0.650***	0.150	0.620			
<b>PA and Rel. Part.</b>						
Model 1				0.150		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.140	-0.390			
Model 2				0.151	0.001	0.030
Constant	2.180***	0.280				
Prob. Behavior	-0.340*	0.150	-0.390			
Rel. Part.	-0.030	0.140	-0.030			
<b>PA and Congregational Support</b>						
Model 1				0.001		
Constant	1.970**	0.430				
Prob. Behavior	-0.030	0.380	-0.020			
Model 2				0.001	0.001	0.010
Constant	2.030	0.940				
Prob. Behavior	-0.020	0.400	-0.020			
Congregational Support	-0.020	0.330	-0.020			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>PA and Positive Religious Coping</b>						
Model 1				0.144		
Constant	2.140***	0.240				
Prob. Behavior	-0.330*	0.150	-0.380			
Model 2				0.144	0.000	0.010
Constant	2.150***	0.290				
Prob. Behavior	-0.330*	0.150	-0.380			
Pos. Religious coping	-0.003	0.040	-0.010			
<b>PA and Negative Religious Coping</b>						
Model 1				0.150		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.140	-0.390			
Model 2				0.152	0.001	0.050
Constant	2.190***	0.280				
Prob. Behavior	-0.340*	0.150	-0.390			
Neg. Religious coping	-0.010	0.040	-0.040			
<b>PA and Spirituality</b>						
Model 1				0.117		
Constant	2.020***	0.220				
Prob. Behavior	-0.280	0.140	-0.340			
Model 2				0.229	0.112	4.370*
Constant	1.310**	0.400				
Prob. Behavior	-0.180	0.140	-0.230			
Spirituality	0.200*	0.100	0.350			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>PA and Religious Identity</b>						
Model 1				0.117		
Constant	2.020***	0.220				
Prob. Behavior	-0.280	0.140	-0.340			
Model 2				0.126	0.009	0.300
Constant	1.830***	0.420				
Prob. Behavior	-0.250	0.150	-0.310			
Religious Identity	0.070	0.130	0.100			
<b>PA and Family Support</b>						
Model 1				0.150		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.140	-0.390			
Model 2				0.239	0.089	3.630
Constant	1.310*	0.490				
Prob. Behavior	-0.250	0.150	-0.280			
Family Support	0.210	0.110	0.320			
<b>PA and Friend Support</b>						
Model 1				0.150		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.140	-0.390			
Model 2				0.226	0.076	3.040
Constant	1.400**	0.490				
Prob. Behavior	-0.260	0.150	-0.290			
Friend Support	0.190	0.110	0.290			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>NA and Rel. Part.</b>						
Model 1				0.297		
Constant	1.150***	0.170				
Prob. Behavior	0.400**	0.110	0.550			
Model 2				0.315	0.018	0.820
Constant	1.250***	0.210				
Prob. Behavior	0.390**	0.110	0.520			
Rel. Part.	-0.100	0.110	-0.140			
<b>NA and Congregational Support</b>						
Model 1				0.001		
Constant	1.440**	0.340				
Prob. Behavior	0.030	0.290	0.030			
Model 2				0.163	0.162	1.940
Constant	2.260**	0.670				
Prob. Behavior	0.090	0.280	0.090			
Congregational Support	-0.330	0.240	-0.410			
<b>NA and Positive Religious coping</b>						
Model 1				0.288		
Constant	1.170***	0.180				
Prob. Behavior	0.390**	0.110	0.540			
Model 2				0.29	0.004	0.154
Constant	1.220***	0.220				
Prob. Behavior	0.400**	0.110	0.540			
Pos. Religious coping	-0.010	0.030	-0.060			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>NA and Negative Religious coping</b>						
Model 1				0.297		
Constant	1.150***	0.170				
Prob. Behavior	0.400**	0.110	0.550			
Model 2				0.299	0.002	0.090
Constant	1.110***	0.220				
Prob. Behavior	0.400**	0.110*	0.540			
Neg. Religious coping	0.010	0.030	0.050			
<b>NA and Spirituality</b>						
Model 1				0.280		
Constant	1.170***	0.180				
Prob. Behavior	0.390**	0.110	0.530			
Model 2				0.399	0.119	5.970*
Constant	1.840***	0.330				
Prob. Behavior	0.300*	0.110	0.410			
Spirituality	-0.190*	0.080	-0.370			
<b>NA and Religious Identity</b>						
Model 1				0.280		
Constant	1.170***	0.180				
Prob. Behavior	0.390**	0.110	0.530			
Model 2				0.295	0.015	0.640
Constant	1.400***	0.340				
Prob. Behavior	0.360**	0.120	0.490			
Religious Identity	-0.090	0.110	-0.130			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>NA and Family Support</b>						
Model 1				0.297		
Constant	1.150***	0.170				
Prob. Behavior	0.400**	0.110	0.550			
Model 2				0.357	0.060	2.870
Constant	1.730***	0.380				
Prob. Behavior	0.340**	0.110	0.460			
Family Support	-0.150	0.090	-0.260			
<b>NA and Friend Support</b>						
Model 1				0.297		
Constant	1.150***	0.170				
Prob. Behavior	0.400**	0.110	0.550			
Model 2				0.373	0.076	3.770
Constant	1.780***	0.370				
Prob. Behavior	0.330**	0.110	0.450			
Friend Support	-0.160	0.080	-0.290			

\**p* < .05    \*\**p* < .01    \*\*\**p* < .001

Table 8  
Moderation Analyses

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Dep. and Rel. Part.</b>						
Model 1				0.232		
Constant	0.950***	0.160				
Prob. Behavior	0.310**	0.100	0.480			
Model 2				0.468	0.236	6.450**
Constant	0.190	0.270				
Prob. Behavior	0.150	0.100	0.220			
Stress	0.040**	0.010	0.550			
Rel. Part.	-0.050	0.090	-0.070			
Model 3				0.500	0.032	1.780
Constant	-0.100	0.340				
Prob. Behavior	0.150	0.010	0.230			
Stress	0.050**	0.010	0.700			
Rel. Part.	0.260	0.240	0.410			
Stress X Rel. Part.	-0.010	0.010	-0.550			
<b>Dept. and Cong. Support</b>						
Model 1				0.001		
Constant	1.320**	0.300				
Prob. Behavior	-0.030	0.290	-0.030			
Model 2				0.504	0.503	4.060
Constant	0.340	0.710				
Prob. Behavior	-0.150	0.240	-0.170			
Stress	0.040*	0.020	0.710			
Cong. Support	-0.040	0.180	-0.050			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.519	0.014	0.210
Constant	-0.810	2.620				
Prob. Behavior	-0.150	0.260	-0.160			
Stress	0.080	0.090	1.330			
Stress X Cong. Support	-0.010	0.030	-0.750			
<b>Dep. and Positive Religious coping</b>						
Model 1				0.223		
Constant	0.980***	0.170				
Prob. Behavior	0.300**	0.100	0.470			
Model 2				0.453	0.230	5.890**
Constant	0.240	0.290				
Prob. Behavior	0.160	0.100	0.250			
Stress	0.040**	0.010	0.540			
Pos. Religious coping	-0.020	0.020	-0.120			
Model 3				0.474	0.021	1.100
Constant	-0.100	0.430				
Prob. Behavior	0.150	0.100	0.230			
Stress	0.050**	0.020	0.720			
Pos. Religious coping	0.050	0.060	0.290			
Stress X Pos. Rel. Coping	-0.002	0.002	-0.490			
Constant						
Prob. Behavior						
Religious Identity						



Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Dep. and Negative Religious Coping</b>						
Model 1				0.232		
Constant	0.950***	0.160				
Prob. Behavior	0.310**	0.100	0.480			
Model 2				0.475	0.242	6.690**
Constant	0.190	0.270				
Prob. Behavior	0.150	0.100	0.230			
Stress	0.040**	0.010	0.570			
Neg. Religious coping	-0.020	0.030	-0.110			
Model 3				0.481	0.007	0.360
Constant	0.020	0.390				
Prob. Behavior	0.150	0.100	0.230			
Stress	0.040**	0.020	0.660			
Neg. Religious coping	0.020	0.070	0.120			
Stress X Neg. Rel. Coping	-0.001	0.002	-0.280			
<b>Dep. and Spirituality</b>						
Model 1				0.204		
Constant	1.010***	0.164				
Prob. Behavior	0.280**	0.100	0.450			
Model 2				0.473	0.269	7.130**
Constant	0.720	0.390				
Prob. Behavior	0.120	0.100	0.180			
Stress	0.030**	0.010	0.450			
Spirituality	-0.120	0.070	-0.270			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.477	0.005	0.244
Constant	0.430	0.700				
Prob. Behavior	0.110	0.100	0.180			
Stress	0.040	0.020	0.600			
Spirituality	-0.040	0.180	-0.080			
Stress X Spirituality	-0.003	0.010	-0.210			
<b>Dep. and Religious Identity</b>						
Model 1				0.204		
Constant	1.010***	0.160				
Prob. Behavior	0.280*	0.100	0.450			
Model 2				0.420	0.216	5.210*
Constant	0.350	0.350				
Prob. Behavior	0.130	0.110	0.210			
Stress	0.040**	0.010	0.510			
Religious Identity	-0.060	0.090	-0.100			
Model 3				0.451	0.031	1.540
Constant	-0.370	0.680				
Prob. Behavior	0.130	0.110	0.210			
Stress	0.060*	0.020	0.870			
Religious Identity	0.270	0.280	0.480			
Stress X Rel. Identity	-0.010	0.010	-0.690			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Dep. and Family Support</b>						
Model 1				0.232		
Constant	0.950***	0.160				
Prob. Behavior	0.310**	0.100	0.480			
Model 2				0.476	0.244	6.740**
Constant	-0.250	0.550				
Prob. Behavior	0.160	0.100	0.250			
Stress	0.040**	0.010	0.620			
Family Support	0.070	0.090	0.140			
Model 3				0.507	0.031	1.790
Constant	0.620	0.850				
Prob. Behavior	0.180	0.100	0.280			
Stress	0.010	0.030	0.150			
Family Support	-0.150	0.180	-0.300			
Stress X Family Support	0.010	0.010	0.440			
<b>Dep. and Friend Support</b>						
Model 1				0.232		
Constant	0.950***	0.160				
Prob. Behavior	0.310**	0.100	0.480			
Model 2				0.465	0.233	6.330**
Constant	0.010	0.510				
Prob. Behavior	0.160	0.100	0.250			
Stress	0.040**	0.010	0.570			
Friend Support	0.030	0.080	0.060			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.495	0.029	1.630
Constant	0.970	0.910				
Prob. Behavior	0.170	0.100	0.260			
Stress	0.004	0.030	0.060			
Friend Support	-0.210	0.200	-0.430			
Stress X Friend Support	0.010	0.010	0.500			
<b>Satisfaction with Life and Religious Participation</b>						
Model 1				0.074		
Constant	3.130***	0.390				
Prob. Behavior	-0.390	0.250	-0.270			
Model 2				0.366	0.293	6.700**
Constant	4.790***	0.640				
Prob. Behavior	0.040	0.240	0.030			
Stress	-0.090**	0.020	-0.600			
Religious Participation	0.260	0.210	0.190			
Model 3				0.422	0.055	2.660
Constant	5.600***	0.800				
Prob. Behavior	0.030	0.230	0.020			
Stress	-0.110***	0.030	-0.790			
Religious Participation	-0.610	0.570	-0.450			
Stress X Rel. Participation	0.030	0.020	0.720			
<b>Satisfaction with Life and Congregational Support</b>						
Model 1				0.078		
Constant	2.970**	0.600				
Prob. Behavior	0.530	0.570	0.280			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 2				0.328	0.250	1.490
Constant	4.250*	1.720				
Prob. Behavior	0.680	0.580	0.360			
Stress	-0.060	0.040	-0.490			
Congregational Support	0.090	0.440	0.070			
Model 3				0.363	0.035	0.380
Constant	7.940	6.220				
Prob. Behavior	0.670	0.610	0.350			
Stress	-0.190	0.210	-1.450			
Congregational Support	-1.140	2.040	-0.800			
Stress X Cong. Support	0.040	0.070	1.170			
<b>Satisfaction with Life and Pos. Rel. Coping</b>						
Model 1				0.075		
Constant	3.150***	0.400				
Prob. Behavior	-0.390	0.250	-0.270			
Model 2				0.377	0.302	6.790**
Constant	5.090***	0.690				
Prob. Behavior	-0.020	0.240	-0.010			
Stress	-0.090**	0.030	-0.620			
Pos. Rel. Coping	0.040	0.050	0.120			
Model 3				0.381	0.004	0.160
Constant	4.790***	1.040				
Prob. Behavior	-0.030	0.240	-0.020			
Stress	-0.080*	0.040	-0.540			
Pos. Rel. Coping	0.100	0.160	0.290			
Stress X Pos. Rel. Coping	-0.002	0.005	-0.202			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Satisfaction with Life and Neg. Rel.</b>						
Model 1				0.074		
Constant	3.130***	0.390				
Prob. Behavior	-0.390	0.250	-0.270			
Model 2				0.337	0.263	5.760**
Constant	4.910***	0.650				
Prob. Behavior	-0.020	0.240	-0.010			
Stress	-0.090**	0.030	-0.590			
Neg. Rel. Coping	0.030	0.060	0.080			
Model 2				0.346	0.010	0.410
Constant	4.460***	0.970				
Prob. Behavior	-0.020	0.240	-0.020			
Stress	-0.070	0.040	-0.470			
Neg. Rel. Coping	0.140	0.180	0.350			
Stress X Neg. Rel. Coping	-0.004	0.010	-0.340			
<b>Satisfaction with Life and Spirituality</b>						
Model 1				0.046		
Constant	2.920***	0.380				
Prob. Behavior	-0.290	0.240	-0.220			
Model 2				0.360	0.314	6.870**
Constant	3.230**	0.910				
Prob. Behavior	0.100	0.230	0.070			
Stress	-0.060*	0.020	-0.440			
Spirituality	0.330*	0.150	0.350			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.361	0.001	0.039
Constant	3.490*	1.640				
Prob. Behavior	0.100	0.230	0.080			
Stress	-0.070	0.050	-0.510			
Spirituality	0.250	0.420	0.270			
Stress X Spirituality	0.003	0.010	0.090			
<b>Satisfaction with Life and Religious Identity</b>						
Model 1				0.046		
Constant	2.920***	0.380				
Prob. Behavior	-0.290	0.240	-0.220			
Model 2				0.363	0.316	6.950**
Constant	3.650***	0.780				
Prob. Behavior	0.170	0.240	0.130			
Stress	-0.080**	0.020	-0.550			
Religious Identity	0.430*	0.200	0.350			
Model 3				0.372	0.010	0.410
Constant	4.490**	1.530				
Prob. Behavior	0.170	0.240	0.120			
Stress	-0.110*	0.050	-0.740			
Religious Identity	0.040	0.630	0.030			
Stress X Religious Identity	0.010	0.020	0.380			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>Satisfaction with Life and Family Support</b>						
Model 1				0.074		
Constant	3.130***	0.390				
Prob. Behavior	-0.390	0.250	-0.270			
Model 2				0.421	0.347	8.700*
Constant	2.610*	1.270				
Prob. Behavior	0.020	0.230	0.010			
Stress	-0.050	0.030	-0.350			
Family Support	0.410*	0.200	0.380			
Model 3				0.430	0.009	0.430
Constant	1.610	1.990				
Prob. Behavior	-0.004	0.230	-0.003			
Stress	-0.010	0.060	-0.090			
Family Support	0.670	0.430	0.620			
Stress X Family Support	-0.010	0.020	-0.230			
<b>Satisfaction with Life and Friend Support</b>						
Model 1				0.074		
Constant	3.130***	0.390				
Prob. Behavior	-0.390	0.250	-0.270			
Model 2				0.470	0.397	10.870***
Constant	2.380*	1.100				
Prob. Behavior	0.070	0.220	0.050			
Friend Support	0.470*	0.170	0.450			
Model 3				0.470	0.000	0.000
Constant	2.390	2.030				
Prob. Behavior	0.070	0.220	0.050			
Stress	-0.050	0.006	-0.360			
Friend Support	0.470	0.440	0.450			
Stress X Friend Support	0.000	0.020	0.003			



Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>PA and Rel. Part.</b>						
Model 1				0.151		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.150	-0.390			
Model 2				0.433	0.282	7.200**
Constant	3.310***	0.380				
Prob. Behavior	-0.100	0.140	-0.110			
Stress	-0.050**	0.001	-0.600			
Rel. Part.	0.040	0.120	0.050			
Model 3				0.449	0.016	0.800
Constant	3.580***	-0.490				
Prob. Behavior	-0.100	0.140	-0.120			
Stress	-0.060**	0.020	-0.700			
Rel. Part.	-0.250	0.350	-0.290			
Stress X Rel. Part.	0.010	0.010	0.390			
<b>PA and Congregational Support</b>						
Model 1				0.000		
Constant	1.950**	0.460				
Prob. Behavior	0.020	0.440	0.020			
Model 2				0.491	0.490	3.850
Constant	4.260**	1.100				
Prob. Behavior	0.310	0.370	0.230			
Stress	-0.070*	0.030	-0.740			
Congregational Support	-0.260	0.280	-0.250			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.520	0.290	0.430
Constant	6.750	3.960				
Prob. Behavior	0.300	0.390	0.220			
Stress	-0.150	0.130	-1.630			
Congregational Support	-1.090	1.300	-1.040			
Stress X Cong. Support	0.030	0.040	1.070			
<b>PA and Pos. Rel. Coping</b>						
Model 1				0.145		
Constant	2.140***	0.240				
Prob. Behavior	-0.340*	0.150	-0.380			
Model 2				0.433	0.288	7.100**
Constant	3.370***	0.410				
Prob. Behavior	-0.110	0.140	-0.120			
Stress	-0.060**	0.020	-0.600			
Pos. Rel. Coping	0.010	0.030	0.060			
Model 3				0.438	0.005	0.244
Constant	3.590***	0.610				
Prob. Behavior	-0.100	0.140	-0.120			
Stress	-0.060**	0.020	-0.690			
Pos. Rel. Coping	-0.030	0.090	-0.130			
Stress X Pos. Rel. Coping	0.001	0.003	0.240			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>PA and Neg. Rel. Coping</b>						
Model 1				0.151		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.150	-0.390			
Model 2				0.438	0.287	7.400*
Constant	3.300***	0.370				
Prob. Behavior	-0.100	0.140	-0.120			
Stress	-0.060**	0.010	-0.610			
Neg. Rel. Coping	0.020	0.040	0.090			
Model 3				0.438	0.000	0.002
Constant	3.280***	0.560				
Prob. Behavior	-0.100	0.140	-0.120			
Stress	-0.050*	0.020	-0.610			
Neg. Rel. Coping	0.030	0.110	0.110			
Stress X Neg. Rel. Coping	0.000	0.003	-0.020			
<b>PA and Spirituality</b>						
Model 1				0.119		
Constant	2.020***	0.220				
Prob. Behavior	-0.280	0.140	-0.340			
Model 2				0.429	0.309	7.570**
Constant	2.400***	0.530				
Prob. Behavior	-0.050	0.130	-0.060			
Stress	-0.040**	0.010	-0.480			
Spirituality	0.170	0.090	0.290			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.430	0.003	0.130
Constant	2.130*	0.940				
Prob. Behavior	-0.050	0.130	-0.060			
Stress	-0.030	0.030	-0.370			
Spirituality	0.250	0.240	0.430			
Stress X Spirituality	-0.003	0.010	-0.160			
<b>PA and Rel. Identity</b>						
Model 1				0.119		
Constant	2.020***	0.220				
Prob. Behavior	-0.280	0.140	-0.340			
Model 2				0.378	0.260	5.840**
Constant	2.830***	0.470				
Prob. Behavior	-0.050	0.140	-0.060			
Stress	-0.050**	0.010	-0.550			
Rel. Identity	0.130	0.120	0.170			
Model 3				0.388	0.010	0.450
Constant	3.360**	0.930				
Prob. Behavior	-0.050	0.140	-0.060			
Stress	-0.070*	0.030	-0.760			
Rel. Identity	-0.120	0.380	-0.160			
Stress X Rel. Identity	0.010	0.010	0.390			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>PA and Family Support</b>						
Model 1				0.151		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.150	-0.390			
Model 2				0.431	0.279	7.120**
Constant	3.320***	0.780				
Prob. Behavior	-0.110	0.140	-0.120			
Stress	-0.050**	0.020	-0.590			
Family Support	0.004	0.120	0.010			
Model 3				0.482	0.051	2.750
Constant	1.830	1.180				
Prob. Behavior	-0.140	0.140	-0.160			
Stress	0.001	0.004	0.020			
Family Support	0.380	0.260	0.570			
Stress X Family Support	-0.020	0.010	-0.550			
<b>PA and Friend Support</b>						
Model 1				0.151		
Constant	2.160***	0.230				
Prob. Behavior	-0.340*	0.150	-0.390			
Model 2				0.432	0.281	7.170**
Constant	3.180***	0.710				
Prob. Behavior	-0.100	0.140	-0.120			
Stress	-0.050**	0.020	-0.570			
Friend Support	0.030	0.110	0.050			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.487	0.055	3.010
Constant	1.390	1.240				
Prob. Behavior	-0.120	0.140	-0.140			
Stress	0.010	0.040	0.120			
Friend Support	0.460	0.270	0.710			
Stress X Friend Support	-0.020	0.010	-0.690			
<b>NA and Religious Participation</b>						
Model 1				0.297		
Constant	1.150***	0.180				
Prob. Behavior	0.410**	0.110	0.550			
Model 2				0.461	0.165	4.440*
Constant	0.560	0.310				
Prob. Behavior	0.240*	0.120	0.320			
Stress	0.030*	0.010	0.430			
Religious Participation	-0.140	0.100	-0.190			
Model 3				0.486	0.025	1.360
Constant	0.270	0.400				
Prob. Behavior	0.240*	0.120	0.330			
Stress	0.040**	0.010	0.560			
Religious Participation	0.170	0.280	0.240			
Stress X Rel. Participation	-0.010	0.010	-0.490			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>NA and Congregational Support</b>						
Model 1				0.002		
Constant	1.470**	0.350				
Prob. Behavior	-0.050	0.340	-0.040			
Model 2				0.388	0.387	2.530
Constant	1.050	0.930				
Prob. Behavior	-0.100	0.310	-0.090			
Stress	0.040	0.020	0.520			
Congregational Support	-0.200	0.240	-0.250			
Model 3				0.389	0.001	0.010
Constant	1.380	3.440				
Prob. Behavior	-0.100	0.340	-0.090			
Stress	0.030	0.110	0.370			
Congregational Support	-0.310	1.130	-0.390			
Stress X Cong. Support	0.004	0.040	0.180			
<b>NA and Pos. Rel. Coping</b>						
Model 1				0.288		
Constant	1.170***	0.180				
Prob. Behavior	0.400**	0.110	0.540			
Model 2				0.420	0.132	3.200
Constant	0.550	0.340				
Prob. Behavior	0.270*	0.120	0.370			
Stress	0.030*	0.010	0.400			
Pos. Rel. Coping	-0.020	0.030	-0.110			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.487	0.055	3.010
Constant	1.390	1.240				
Prob. Behavior	-0.120	0.140	-0.140			
Stress	0.010	0.040	0.120			
Friend Support	0.460	0.270	0.710			
Stress X Friend Support	-0.020	0.010	-0.690			
<b>NA and Religious Participation</b>						
Model 1				0.297		
Constant	1.150***	0.180				
Prob. Behavior	0.410**	0.110	0.550			
Model 2				0.461	0.165	4.440*
Constant	0.560	0.310				
Prob. Behavior	0.240*	0.120	0.320			
Stress	0.030*	0.010	0.430			
Religious Participation	-0.140	0.100	-0.190			
Model 3				0.486	0.025	1.360
Constant	0.270	0.400				
Prob. Behavior	0.240*	0.120	0.330			
Stress	0.040**	0.010	0.560			
Religious Participation	0.170	0.280	0.240			
Stress X Rel. Participation	-0.010	0.010	-0.490			



Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>NA and Congregational Support</b>						
Model 1				0.002		
Constant	1.470**	0.350				
Prob. Behavior	-0.050	0.340	-0.040			
Model 2				0.388	0.387	2.530
Constant	1.050	0.930				
Prob. Behavior	-0.100	0.310	-0.090			
Stress	0.040	0.020	0.520			
Congregational Support	-0.200	0.240	-0.250			
Model 3				0.389	0.001	0.010
Constant	1.380	3.440				
Prob. Behavior	-0.100	0.340	-0.090			
Stress	0.030	0.110	0.370			
Congregational Support	-0.310	1.130	-0.390			
Stress X Cong. Support	0.004	0.040	0.180			
<b>NA and Pos. Rel. Coping</b>						
Model 1				0.288		
Constant	1.170***	0.180				
Prob. Behavior	0.400**	0.110	0.540			
Model 2				0.420	0.132	3.200
Constant	0.550	0.340				
Prob. Behavior	0.270*	0.120	0.370			
Stress	0.030*	0.010	0.400			
Pos. Rel. Coping	-0.020	0.030	-0.110			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.435	0.014	0.690
Constant	0.230	0.520				
Prob. Behavior	0.270*	0.120	0.360			
Stress	0.040*	0.020	0.550			
Pos. Rel. Coping	0.040	0.080	0.220			
Stress X Pos. Rel. Coping	-0.002	0.002	-0.400			
<b>NA and Neg. Rel. Coping</b>						
Model 1				0.297		
Constant	1.150***	0.180				
Prob. Behavior	0.410**	0.110	0.550			
Model 2				0.427	0.131	3.310
Constant	0.480	0.320				
Prob. Behavior	0.270*	0.120	0.360			
Stress	0.030*	0.010	0.410			
Neg. Rel. Coping	-0.010	0.030	-0.040			
Model 3				0.435	0.008	0.410
Constant	0.260	0.470				
Prob. Behavior	0.270*	0.120	0.360			
Stress	0.040*	0.020	0.520			
Neg. Rel. Coping	0.050	0.090	0.220			
Stress X Neg. Rel. Coping	-0.002	0.003	-0.310			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>NA and Spirituality</b>						
Model 1				0.279		
Constant	1.170***	0.190				
Prob. Behavior	0.400**	0.120	0.530			
Model 2				0.501	0.222	6.230**
Constant	1.140*	0.450				
Prob. Behavior	0.220	0.110	0.290			
Stress	0.030*	0.010	0.340			
Spirituality	-0.170*	0.080	-0.320			
Model 3				0.504	0.003	0.160
Constant	0.880	0.810				
Prob. Behavior	0.210	0.110	0.290			
Stress	0.040	0.030	0.450			
Spirituality	-0.100	0.210	-0.180			
Stress X Spirituality	-0.003	0.010	-0.170			
<b>NA and Religious Identity</b>						
Model 1				0.279		
Constant	1.170***	0.190				
Prob. Behavior	0.400**	0.120	0.530			
Model 2				0.160	3.990*	
Constant	0.700	0.410				
Prob. Behavior	0.220	0.120	0.290			
Stress	0.030*	0.010	0.420			
Religious Identity	-0.130	0.100	-0.180			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
Model 3				0.470	0.031	1.580
Constant	-0.150	0.790				
Prob. Behavior	0.220	0.120	0.300			
Stress	0.060*	0.030	0.770			
Religious Identity	0.270	0.330	0.390			
Stress X Religious Identity	-0.010	0.010	-0.690			
<b>NA and Family Support</b>						
Model 1				0.297		
Constant	1.150***	0.180				
Prob. Behavior	0.410**	0.110	0.550			
Model 2				0.428	0.132	3.350*
Constant	0.680	0.660				
Prob. Behavior	0.270*	0.120	0.360			
Stress	0.030	0.010	0.360			
Family Support	-0.040	0.100	-0.070			
Model 3				0.486	0.058	3.160
Constant	2.020	0.990				
Prob. Behavior	0.300*	0.120	0.400			
Stress	-0.020	0.030	-0.280			
Family Support	-0.380	0.220	-0.670			
Stress X Family Support	0.010	0.010	0.590			

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> Change	<i>F</i> for <i>R</i> <sup>2</sup> Change
<b>NA and Friend Support</b>						
Model 1				0.297		
Constant	1.150***	0.180				
Prob. Behavior	0.410**	0.110	0.550			
Model 2				0.442	0.146	3.780*
Constant	0.930	0.590				
Prob. Behavior	0.250*	0.120	0.340			
Stress	0.030	0.010	0.330			
Friend Support	-0.090	0.090	-0.150			
Model 3				0.173	0.031	1.620
Constant	2.060	1.060				
Prob. Behavior	0.270*	0.120	0.360			
Stress	-0.010	0.030	-0.190			
Friend Support	-0.360	0.230	-0.650			
Stress X Friend Support	0.010	0.001	0.510			

\**p* < .05    \*\* *p* < .01    \*\*\**p* < .001

## APPENDIX B

### Study Measures

#### Parent Demographic Information

Please respond to the following items in reference to yourself, the parent.

1. Age:
2. Race/Ethnicity:
3. Please list each of the people who live in your household other than yourself. Include each person's age, gender, and relationship to you (e.g., daughter, husband). Also indicate whether or not each person is diagnosed with an autism spectrum disorder. **Do not include anyone's name.**
4. Please enter the total number (using numerals) of people who live in your household other than yourself who have been diagnosed with an autism spectrum disorder.
5. Do you have more than one child with an autism spectrum disorder?
  - a. Yes (1)/No (0)
    - i. If yes, display the following text: "You have indicated that you have more than one child with an autism spectrum disorder. Please complete the remainder of the survey in reference to ONE of your children with autism."
6. For your child with autism, please list any of his or her immediate family members (e.g., siblings, biological father) who DO NOT live in the household with him or her. Include each person's age, gender, and relationship to the child with autism. Also indicate whether or not each person is diagnosed with an autism spectrum disorder. **Do not include anyone's name.**
7. Please enter the total number (using numerals) of your child with autism's immediate family members who DO NOT live in the household with him or her and have also been diagnosed with an autism spectrum disorder.
8. What is the highest level of education you have attained?
  - a. Less than High School (0), Some High School (1), High School Diploma (2), Trade or Technical Degree (3), Some College (4), Associate's Degree (5), Bachelor's Degree (6), Some Graduate School (7), Master's Degree (8), Doctoral/Professional Degree (9)
9. Are you currently employed?
  - a. Yes (1)/No (0)
10. If so, what is your occupation?
11. What is your family's approximate average yearly income?
  - a. Less than \$20,000 (0); \$20,000-\$40,000 (1); \$40,000-\$60,000 (2); \$60,000-\$80,000 (3); \$80,000-\$100,000 (4), Greater than \$100,000 (5)
12. What is your current marital status?
  - a. Single (0), Married (1), Separated (2), Divorced (3), Widowed (4)

### **Child Characteristics**

Please respond to the following items in reference to your child with an autism spectrum disorder.

1. Child's Gender:
2. Child's Age:
3. Child's Grade in School:
4. Child's Race/Ethnicity:
5. Child's Diagnosis:
6. How long has your child been diagnosed with this condition?
7. Does your child receive special services at school?
  - a. Yes/No
8. Did you adopt your child?
  - a. Yes/No
9. If yes, how old was your child when adopted?
10. How would you describe your child's social functioning (e.g., communication, ability to form friendships, ability to carry on a conversation)?
  - a. 0 = Not at all impaired, 1 = Somewhat impaired, 2 = Very impaired
11. How would you describe your child's ability to maintain eye contact?
  - a. 0 = Not at all impaired, 1 = Somewhat impaired, 2 = Very impaired
12. How would you describe your child's emotional functioning (e.g., ability to express and deal with emotions in a healthy way)?
  - a. 0 = Not at all impaired, 1 = Somewhat impaired, 2 = Very impaired
13. How would you describe your child's cognitive functioning (e.g., ability to learn and process information)?
  - a. 0 = Not at all impaired, 1 = Somewhat impaired, 2 = Very impaired
14. How severe are your child's repetitive behavior patterns (e.g., narrow interests, preference for a set routine, repetitive movements)?
  - a. 0 = Not at all severe, 1 = Somewhat severe, 2 = Very severe
15. How severe is your child's repetitive verbal behavior?
  - a. 0 = Not at all severe, 1 = Somewhat severe, 2 = Very severe
16. How difficult is it for you to manage your child's behavior when interacting with him or her individually?
  - a. 0 = Not at all difficult, 1 = Somewhat difficult, 2 = Very difficult
17. How difficult is it for you to manage your child's behavior when interacting with him or her in public places?
  - a. 0 = Not at all difficult, 1 = Somewhat difficult, 2 = Very difficult
18. How difficult is it for you to manage your child's behavior when he or she is interacting with siblings or other family members?
  - a. 0 = Not at all difficult, 1 = Somewhat difficult, 2 = Very difficult

19. How difficult is it for teachers and other professionals to manage your child's behavior at school?
- a. 0 = Not at all difficult, 1 = Somewhat difficult, 2 = Very difficult
20. Below is a list of challenging behaviors performed by some children with autism. Please indicate how often, if ever, your child performs each of the following behaviors.
- 0 = Never or Rarely, 1 = Monthly, 2 = Weekly, 3 = Daily,  
4 = Multiple Times Per Day
- a. Self-injury (e.g., head-banging, hand-biting, etc.)
- b. Aggressive behavior (e.g., hitting others, biting others, kicking others)
- c. Disruptive behavior (e.g., throwing items, overturning furniture, intentionally damaging property)
- d. Wandering/elopement (e.g., leaving the house without anyone's knowledge, running away from a parent in public)
21. Think about the most difficult challenge you faced in relation to your child with autism **during the past 2 weeks**. What happened and how did you address the challenge?

### **Parental Stress Scale (Berry & Jones, 1995)**

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with your child with autism typically is. Please indicate the degree to which you agree or disagree with the following items by selecting the appropriate response.

0 = Strongly Disagree, 1 = Disagree, 2 = Undecided,  
3 = Agree, 4 = Strongly Agree

1. I am happy in my role as a parent.
2. There is little or nothing I wouldn't do for my child if it was necessary.
3. Caring for my child sometimes takes more time and energy than I have to give.
4. I sometimes wonder whether I am doing enough for my child.
5. I feel close to my child.
6. I enjoy spending time with my child.
7. My child is an important source of affection for me.
8. Having children gives me a more certain and optimistic view for the future.
9. The major source of stress in my life is my child.
10. Having children leaves little time and flexibility in my life.
11. Having children has been a financial burden.
12. It is difficult to balance different responsibilities because of my child.
13. The behavior of my child is often embarrassing or stressful to me.
14. If I had to do it over again, I might decide not to have children.
15. I feel overwhelmed by the responsibility of being a parent.



16. Having children has meant having too few choices and too little control over my life.
17. I am satisfied as a parent.
18. I find my child enjoyable.

**Positive and Negative Affect (Mroczek & Kolarz, 1998)**

These questions ask about how you have felt IN THE PAST 30 DAYS.

0 = Not at all, 1 = A little of the time, 2 = Some of the time,  
3 = Most of the time, 4 = Almost all the time

1. Extremely happy.
2. Full of life.
3. Hopeless.
4. In good spirits.
5. Nervous.
6. Restless or fidgety.
7. Satisfied.
8. So sad, nothing could cheer you.
9. That everything was an effort.
10. Worthless.
11. Calm and peaceful.
12. Cheerful.

**Depressive Symptoms (Andreson et al., 1994)**

Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the **past week**.

0 = Rarely or None of the Time (less than 1 day)  
1 = Some or a Little of the Time (1-2 days)  
2 = Occasionally or a Moderate Amount of Time (3-4 days)  
3 = All of the Time (5-7 days)

During the past week...

1. I was bothered by things that usually don't bother me.
2. I had trouble keeping my mind on what I was doing.
3. I felt depressed.
4. I felt that everything I did was an effort.
5. I felt hopeful about the future.
6. I felt fearful.
7. My sleep was restless.

8. I was happy.
9. I felt lonely.
10. I could not “get going.”

**Satisfaction with Life Scale (Diener, Emmons, Larson, & Griffin, 1985)**

Below are five statements with which you may agree or disagree. Indicate your agreement with each item by selecting the appropriate response. Please be open and honest in your responding.

0 = Strongly Disagree, 1 = Disagree, 2 = Slightly Disagree,  
3 = Neither Agree nor Disagree, 4 = Slightly Agree,  
5 = Agree, 6 = Strongly Agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want out of life.
5. If I could live my life over, I would change almost nothing.

**Religion/Spirituality Measures**

The following section asks about religious beliefs and practices such as attending church, praying, etc. Although many people vary greatly in how they view religion and some of the following questions may be more or less relevant to certain people, please answer each question to the best of your ability given its relevance to your life.

1. Do you have a particular religion or faith?
  - a. Yes/ No
2. If so, what is it?
3. Religious participation items-see below.
  
4. Do you belong to a particular church, temple, mosque, or other religious community?
  - a. Yes/No
    - i. If no was selected, participants were redirected to the Brief RCOPE (See below).
5. Approximately how many people belong to your religious community?
6. Please rate the level of support you receive from the members of your religious community in managing stress associated with parenting your child with autism.
  - a. 0 = No support, 1 = Some support, 2 = A lot of support

### **Religious Participation**

0 = Never, 1 = A few times a year, 2 = Once a month,  
3 = Once a week, 4 = More than once a week

In the past 12 months, how often did you attend religious services?

In the past 12 months, how often did you attend any other special activities (for example, social group, choir, Bible class) as part of your religion or faith?

### **Religious Support Scale-Congregational Support Subscale (Fiala, Bjorck, & Gorsuch, 2002)**

We would like to learn about people's perceptions of support related to their life of faith. Please rate the degree to which you feel each one applies to you in general.

0 = Strongly Disagree, 4 = Strongly Agree

1. Others in my congregation give me the sense that I belong.
2. I have worth in the eyes of others in my congregation.
3. Others in my congregation care about my life and situation.
4. If something went wrong, others in my congregation would give me assistance.
5. I feel appreciated by others in my congregation.
6. I can turn to others in my congregation for advice when I have problems.
7. I do not feel close to others in my congregation.

### **Brief RCOPE (Pargament, Smith, Koenig, & Perez, 1998)**

The following statements describe specific ways people might cope with raising a child with autism. As you think of the challenges associated with raising your child with autism that you have faced, how much do you use each of the following things to cope with raising a child with autism?

0 = Not at All, 1 = Somewhat, 2 = Quite a Bit, 3 = A Great Deal

1. Looked for a stronger connection with God.
2. Sought God's love and care.
3. Sought help from God in letting go of my anger.
4. Tried to put my plans into action with God.
5. Tried to see how God might be trying to strengthen me in this situation.
6. Asked forgiveness for my sins.
7. Focused on religion to stop worrying about my problems.
8. Wondered whether God had abandoned me.
9. Felt punished by God for my lack of devotion.
10. Wondered what I did for God to punish me.
11. Questioned God's love for me.
12. Wondered whether my church had abandoned me.
13. Decided the devil made this happen.
14. Questioned the power of God.

### **Spirituality Subscale of the Spiritual Transcendence Index (Seidlitz et al., 2002)**

Please respond to each of the items below by selecting the *one* response that *most closely* describes the extent to which you agree or disagree with the statement.

0 = Strongly Disagree, 1 = Disagree, 2 = Slightly Disagree,  
3 = Slightly Agree, 4 = Agree, 5 = Strongly Agree

1. My spirituality gives me a feeling of fulfillment.
2. Even when I experience problems, I can find a spiritual peace within.
3. Maintaining my spirituality is a priority for me.
4. My spirituality helps me to understand my life's purpose.

### **Religious Identity**

Use the scale below to answer the following questions:

0 = Strongly Disagree, 4 = Strongly Agree

1. I have a strong sense of belonging to my religion.
2. I feel good about my religion.
3. I am happy about my religious beliefs.
4. I have a strong attachment to my religion.
5. In general, being a member of my religion is an important part of my self-image.
6. Being a part of my religion is an important reflection of who I am.
7. I feel that my religion has made valuable contributions to this society.
8. I am proud to have my religious beliefs.

### **Multidimensional Scale of Perceived Social Support- Family and Friend Support Subscales (Zimet et al., 1988)**

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

0 = Very Strongly Disagree, 1 = Strongly Disagree, 2 = Mildly Disagree,  
3 = Neutral, 4 = Mildly Agree, 5 = Strongly Agree, 6 = Very Strongly Agree

1. My family really tries to help me.
2. I get the emotional help and support I need from my family.
3. I can talk about my problems with my family.
4. My family is willing to help me make decisions.
5. My friends really try to help me.
6. I can count on my friends when things go wrong.

7. I have friends with whom I can share my joys and sorrows.

8. I can talk about my problems with my friends.

Please click and drag to rank the following groups from 1 to 3 in terms of who you rely on most for support in parenting your child with autism, with 1 representing the group that you rely on the most.

- a. Family
- b. Friends
- c. Religious Community

## CURRICULUM VITAE

**Richard Francis Davis, III**

### **Education**

Wake Forest University, Winston-Salem, NC  
Area of Study: Psychology  
Degree: Master of Arts, May 2016  
GPA: 3.87

Furman University, Greenville, SC  
Major: Psychology  
Degree: Bachelor of Science, *Magna cum Laude*, December 2013  
GPA: 3.82

### **Honors and Awards**

Burts Scholar Psychology Award, Furman University, 2014  
Dean's List, Furman University, 2010-2013  
Furman University Achiever Scholarship, 2010-2013  
Furman Scholar (additional scholarship), 2010-2013  
Eagle Scout, 2008

### **Research Experience**

*Master's Thesis*, Wake Forest University, Department of Psychology, July 2015-May 2016.  
Advisor: Lisa Kiang, Ph.D.

Duties: Designed and implemented a study exploring the role of religious coping in the psychological well-being of mothers of children with autism.

*Graduate Research Assistant*, Wake Forest University, Department of Psychology, December 2015-Present.  
Principal Investigator: Lisa Kiang, Ph.D.

Duties: Content analysis and qualitative coding for invited, peer-reviewed annual review paper for the *Asian American Journal of Psychology*.

*Directed Thesis Research*, Wake Forest University, Department of Psychology with Lisa Kiang, Ph.D., August 2014-July 2015.

Duties: Used multilevel modeling to analyze data from a longitudinal study of Asian American high school students to determine the extent to which religious identity and religious participation change over time and are predictive of psychological well-being among this population. Prepared and submitted a manuscript for publication and prepared a poster presentation outlining the research.

*Research Assistant*, Children's Healthcare of Atlanta, Marcus Autism Center, Severe Behavior Clinic, Atlanta, GA, March-August 2014.

Principal Investigator: Nathan A. Call, Ph.D., BCBA-D

Duties: Facilitated data collection, entry, and organization for several studies examining behavioral approaches to the treatment of severe problem behavior, including aggression, self-injury, and elopement.

*Supervised Research*, Furman University, Department of Psychology with Beth A. Pontari, Ph.D., August 2012- July 2013

Duties: Designed and implemented an independent research project examining the Multiple Audience Problem. Conducted preliminary literature review, designed study and study materials, prepared and submitted IRB application, scheduled participants and administered study, coded and entered data and performed data analysis using SPSS. Prepared a poster presentation outlining the project.

### **Published Article**

Davis, R. F., III & Kiang, L. (2016). Religious identity, religious participation, and psychological well-being in Asian American adolescents. *Journal of Youth and Adolescence*, 45, 532-546.

### **Conference Presentations**

Davis, R. F., III, & Kiang, L. (2016, April). *Religious identity, religious participation, and psychological well-being in Asian American adolescents*. Poster presented at the meeting of the Society for Research on Adolescence, Baltimore, MD.

Davis, R. F., III, & Kiang, L. (2015, April). *Religious identity, religious participation, and mental health in Asian American adolescents*. Poster presented at the meeting of the North Carolina Psychological Association, Chapel Hill, NC.

Davis, R. F., III., & Pontari, B. A. (2013, November). *Presenting information to multiple audiences*. Poster presented at the meeting of the Society of Southeastern Social Psychologists, Augusta, GA.

## **Teaching Experience**

*Teaching Assistant* for E.J. Masicampo, Ph.D., and Christian Waugh, Ph.D., Wake Forest University, Department of Psychology, August 2014-May 2016.

Duties: Conducted weekly laboratory sessions for an undergraduate research methods and statistics course, created exam questions, graded lab assignments, exams, and research reports, provided writing instruction and assistance to students outside of class.

*Teaching Assistant* for Beth A. Pontari, Ph.D., Furman University, Department of Psychology, January-May 2013.

Duties: Supervised laboratory sessions, presented relevant background information for a class research project, assisted students with writing, and graded papers for a psychology research methods and statistics course.

## **Clinical Experience**

*Behavior Data Analyst*, Children's Healthcare of Atlanta, Marcus Autism Center, Severe Behavior Clinic, Atlanta, GA, January-March 2014.

Supervisor: Seth Clark, BCBA

Duties: Worked under the supervision of licensed clinicians to implement Applied Behavior Analysis (ABA) for the treatment of severe problem behavior in children, adolescents, and young adults with autism and other developmental disabilities.

*Intern*, Challenging Horizons Program, Greenville, SC, August –December 2013

Supervisor: Jennifer Massey, LISW-CP

Duties: Assisted in the implementation of an after-school intervention targeting children with ADHD. I also conducted research evaluating the program in a private practice setting.

*Youth Services Intern*, Ridgeview Institute, Smyrna, GA, June-August 2013

Supervisor: Beth Houser, RN

Duties: Observed and assisted clinical staff in the supervision and counseling of mentally ill youth between the ages of 11 and 17 in the adolescent unit of a psychiatric hospital in the Atlanta area. Patients participate in a wide variety of inpatient and outpatient programs, including a unique 30-day Recovery Residence program designed specifically for substance use patients. Ridgeview's programs heavily utilize the principles of Dialectical Behavioral Therapy (DBT).



## **Honor Societies**

Phi Beta Kappa

Psi Chi, International Honor Society in Psychology

Alpha Epsilon Delta, National Pre-Health Professionals Honor Society

Phi Eta Sigma, National Freshmen Honor Society

## **Professional Organization**

Society for Research on Adolescence