THE INFLUENCE OF RELIGIOSITY ON COPING STRESS AND MARITAL RELATIONSHIP OF PARENTS RAISING A CHILD WITH AUTISM SPECTRUM DISORDER IN PAKISTAN

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Title of Study: THE INFLUENCE OF RELIGIOSITY ON COPING STRESS AND MARITAL RELATIONSHIP OF PARENTS RAISING A CHILD WITH AUTISM SPECTRUM DISORDER IN PAKISTAN

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Abstract: Parents in Pakistan are under stress by challenges of raising a child with Autism Spectrum Disorder (ASD). This study aimed to find if there is a mean difference in stress, religiosity and marital satisfaction of parents of children raising children with ASD and find if stress and religiosity predicted marital relationship/satisfaction between these parents. Using cultural and developmental theories of Lazarus and Folkman's theory of stress and coping (Lazarus & Folkman, 1984); and Pargament's religious coping theory (Pargament, 1997) as the theoretical framework, the study examined how stress and religiosity in parents of children with Autism Spectrum Disorder affect their marital relationship. This research focused on parents who are living in Pakistan and practice religion as a coping mechanism for the issues in their lives. Based on literature review there is no significant study in this regard. An online survey was conducted in five ASD centers in five major cites of Pakistan. Results from the survey indicated that stress effected fathers more than mothers, yet fathers believed more in religiosity and were more satisfied in their marital relationship than mothers were.

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CHAPTER I

INTRODUCTION

Marriage as of today, is the state of being united to a person in a consensual and contractual relationship recognized by law. The contract is regulated by laws, rules, customs, beliefs, and attitudes that prescribe the rights and duties of the partners and accords status to their offspring (Usakli, 2013).The universality of marriage is attributed to the many basic social and personal functions it performs, such as procreation, regulation of sexual behavior, care of children and their education and socialization. The type, functions, and characteristics of marriage vary from culture to culture, and can change over time (Kefalas, Furstenberg, Carr, & Napolitano, 2011).

Every marriage brings challenges, often mounting demands. How a couple manages them determines whether their relationship collapses or holds firm (Sorokowski et al., 2017). Not only is the birth of a child a life-changing event that creates a rewarding new bond between the child and the parent; it affects the objective characteristics of a person's life—including his or her financial situation and time for self - and a variety of more subjective features including the quality of romantic and familial relationships (Dyrdal & Lucas, 2013).

Raising a child has a significant effect on the parents across a wide range of areas including development of temperament (Pesonen et al., 2008), internalizing problems (Fanti, Henrich, Brookmeyer, & Kupermine, 2008), externalizing problems (Gross, Shaw, & Moilanen,

2008; Zhang, Chen, Zhang, Zhou, & Wu, 2008), emotional adjustment (VanderValk, de Goede, Spruijt, & Meeus, 2007), self-regulation (Brody & Ge, 2001), and substance use (Wills & Dishion, 2004), parental depression (Gross et al., 2008), marital distress (VanderValk et al., 2007), parenting practices (Brody & Ge, 2001), and parent–child relationships (Fanti et al., 2008; Zhang et al., 2008). However, the birth of a child with a disability, creates higher parenting stress, which has been associated with numerous undesirable outcomes in the marital life, including parent depression (Anastopoulos, Guevremont, Shelton, & DuPaul, 1992; Deater-Deckard et al., 1998; Hastings, Daley, Burns, & Beck, 2006), marital conflict (Kersh, Hedvat, Hauser-Cram, Warfield, 2006; Suárez & Baker, 1997), poorer physical health of parents (Eisenhower, Baker, & Blacher, 2009; Oelofsen & Richardson, 2006), less effective parenting (Coldwell, Pike, & Dunn, 2006; Crnic, Gaze, & Hoffman, 2005), and increased child behavior problems (Baker et al., 2003; Briggs-Gowan, Carter, Skuban, & Horwitz, 2001; Donenberg & Baker, 1993; Johnson & Mash, 2001).

Children with disabilities are more likely to have family environments with high levels of parenting stress. Feelings of anxiety are often higher in families raising child with a disability, as of overwhelming demands of caring for the child with disability, as well as other children in the family. These stresses can originate from family problems, marital issues, child behavioral and social issues, or lack of resources and support (Hastings et al., 2005; Mulroy et al., 2008). Moreover, research indicates that in families raising a child with a disability there is decreased marital satisfaction and increased marital conflict (Rivers & Stoneman, 2003). The quality of the marriage may be compromised in these families due to the increased family stress, which may lead to a dissatisfying and argumentative marital relationship (Marshall et al., 2003). In addition, studies indicate the presence of a child with a disability makes it difficult for parents to

maintain the quality of their marriage (Fife, Norton, & Groom, 1987; Mullen, 1997).

Not all disabilities in children affect families the same. The type of disability is related to the stress and subsequent burden experienced by parents. Parents of children with Autism Spectrum Disorder (ASD) report more stress than parents of typically developing children or other disabilities (Ahmad & Dardas, 2015; Hastings et al., 2005; Juha´sova´, 2015; Mulroy et al., 2008). For example, mothers of children with Down syndrome report less stress than mothers of children with Autism Spectrum Disorder (Abbeduto et al., 2004). Studies on parental stress consistently show higher stress among families of children with ASD as compared to families with typically developing children or children with other developmental disabilities (Baker-Ericzen et al. 2005; Dumas et al. 1991). Increased depression and lower quality of life in these families are just a few effects identified (Bouma and Schweitzer 1990; Mugno et al. 2007; Olsson and Hwang 2001; Sanders and Morgan 1997; Wolf et al. 1989). Sukmak and Sangsuk (2018) found that parental stress was a natural consequence of an ASD diagnosis in children (Davis & Carter, 2008; Pottie & Ingram, 2008). The sources of the stress are varied and complex and can include engaging with service providers (Boshoff, Gibbs, Phillips, Wiles, & Porter, 2016; Russell & Ricci, 2016), challenges with personal/self-management, stigma (Dempster, Wildman, & Keating, 2013) and religious beliefs (Bonis & Sawin, 2016). Although parenting stress often is higher in families caring for a child with a disability (Sim, Cordier, Vaz, Parson and Falkmer, 2017), this stress exists along a continuum and is influenced by a number of factors including the parents' marital relationship (Kersh, Hedvat, Hauser-Cram, & Warfield, 2006) and their religiosity (Speraw, 2006).

Religion, usually functions as a conservational force in the coping process, helping to maintain feelings of meaning, mastery and spiritual connection during life crisis. Thus in time of

stress, religious coping helps to discover meaning, to garner control, to acquire comfort by virtue of closeness to God, to achieve closeness with others and to transform life (Pargament *et al.*, 2000).

Pargament (1997) defined religion as 'a process, *a search for significance in ways related to the sacred*' (p. 32, emphasis in original) and defined coping as '*a search for significance in times of stress*' (p. 90, emphasis in original). According to Pargament and Raiya (2007), religious coping methods are 'ways of understanding and dealing with negative life events that are related to the sacred' (p. 23). They classified religious coping methods into two broad groups positive and negative coping. An individual when using positive religious coping strategies reinterprets the stressor as salutary meaning and purpose to life and treating God as the partner. Such coping strategy tends to be salutary for the individual under stress. By contrast, negative religious coping approaches reinterprets the stressor as a punishment given by God, passively depending on God to resolve the stressor. Such a coping strategy tends to be deleterious for the individual under stress (Pargament *et al.*, 2011, p. 51).

Empirical studies of diverse groups facing a variety of major life stressors have shown that religious coping methods have significant implications for well-being (Parker, Mandelco, Olsen Roper, Freeborn, & Dyches, 2011). The efficacy of this coping resource appears to vary depending on a person's specific religious beliefs and the role these beliefs serve in everyday life (Graham et al. 2011). Many of the studies in this area of research suggest that religion can be a positive force and a negative force for physical and mental health. Pargament, Smith, Koenig, and Perez (1998) hypothesized two higher-order patterns of religious coping: one pattern made up of positive religious coping methods and the other made up of negative religious coping methods. The positive religious coping methods reflect a secure relationship with God, a belief

that there is a greater meaning to be found in life, and a sense of spiritual connectedness with others. In contrast, the negative religious coping pattern involves expressions of a less secure relationship with God, a tenuous and ominous view of the world, and a religious struggle to find and conserve significance in life. When parenting a child with ASD, studies have documented the critical role that social and religious support plays in aiding parents to cope with stress (Tehee et al., 2009; Ekas et al., 2010; Lovell et al., 2012; Weiss et al., 2013).

In marriages, religiosity has been associated with positive coping responses, greater conflict resolution, and shared values such as love, care, and forgiveness (Lambert & Dollahite, 2006; Mahoney, 2005). In addition, greater involvement in one's religion appears to dissuade individuals from resorting to maladaptive rather than adaptive methods to resolve marital disputes (Mahoney, 2005). Finally, one's religiosity also offers couples unique strategies to deal with marital conflict; for example, long-married, highly religious couples often say they turn to prayer to help resolve marital conflict (Butler, Stout, & Gardner, 2002). Alternately, religiosity has been associated with negative coping responses which may serve as a source of conflict in marriages. First, church attendance can become a source of conflict for couples who do not share the same levels of personal commitment (Call & Heaton, 1997). Marital conflict may also occur depending on the degree to which partners differ in their religiously-based interpretations as well as when one partner violates a presumably shared religious value (Mahoney, 2005). Second, incompatible religiosity has been related to dissolution of marriages (Mahoney, 2005).

Partners with dissimilar religious affiliations, beliefs, and practices also have higher divorce rates and lower marital satisfaction than do couples with the same religious back-grounds, implying religiously based differences may increase conflicting interactions (Mahoney, 2005). Research on religiosity in families raising a child with disability shows that a parent's

religiosity can be a resource for these parents and is an important factor associated with adaptation and resilience (King et al., 2006; McCubbin & McCubbin, 1993; Rogers-Dulan, 1998; Skinner et al., 2001). As such, it is important to understand the effect of raising a child with ASD on the stress and 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 ASD, religious coping may be especially salient given the role of religion in shaping individual worldviews (Ekas, Whitman & Shivers, 2009). Most of the research has examined the relationship between religiosity and marital satisfaction have come from the USA, Canada, and other first world countries; however, some studies have come from Turkey and Iran (Hunler & Gencoz, 2005) and have revealed that religiosity is a vital predictor of marital satisfaction. The studies from these countries focused on and investigated the idea that the relationship between religiosity level and marital satisfaction is positively associated; more religious married couples have a happier, more stable married life compared with other couples (Davis & Kiang, 2018).

Pakistan is a predominantly Muslim country with 95-98% people being Muslims and with different denominations (Pakistan Bureau of Statistics, 2019). Some researchers have examined the influence of religiosity in strengthening marital satisfaction; integration of therapies (Akhter, Ashraf, Ali, Riwan & Rehman, 2018), and the relationship of religiosity and marital satisfaction (Aman, Abbas, Nurunnabi & Bano, 2019). These studies focused on and investigated the positive relationship between religiosity level and marital satisfaction. That is, they considered whether, more religious married couples have happier, more stable married life than other couples. None of these studies have investigated the effect of religiosity on the parents raising a child with ASD. Nor the effect of stress on marital relationship between the couples. Moreover, there is a gap in the literature in the context of the effect of religiosity on parents with

children with ASD in Pakistan.

Statement of the Problem

The current research focused on the influence of religiosity on coping stress and marital relationship of parents raising a child with Autism Spectrum Disorders in Pakistan.

Purpose

The purpose of the study was to investigate and apply Lazarus and Folkman's (1984) theory of stress and coping, and Pargament's (1997) religious coping theory. This study examined how stress in parents of children with ASD affect their religiosity marital relationship/stress. This research focused on parents who are living in Pakistan, practice religion as a coping mechanism for the issues in their lives.

There is a gap in the literature in the context of the effect of religiosity on parents with children with ASD in Pakistan. This specific study attempted to fill the critical research gap with an extensive investigation utilizing a quantitative research method by investigating effect of religiosity as a coping measure to deal with stress and marital relationship among parents of children with ASD.

Significance

This research is significant due to its empirical nature of venturing into the areas of religiosity on parents with a child with ASD, where no previous study with a child with Autism Spectrum Disorder has been conducted so far as per the literature research. Like most countries in the world, Pakistan has seen a significant increase in the incidence of ASD. The study will fulfil the existing gap in extant literature in Pakistan about the effectiveness of religion in coping of stress and the marital relationship of parents in a Muslim dominated society, with a focus on parents of children with ASD.

This study will establish that positive religious coping is effective in helping parents maintain a sense of parenting competence, particularly with regard to parenting, parenting attitudes toward their child with ASD and their spouses (Weyand, O'Laughlin, & Bennett, 2013). Results from the study will enhance the current knowledge base about role and efficacy of religion in coping stress and effect on marital relationships of parents of children with ASD.

Overview of Methodology

Using a quantitative approach, this study gathered data of parents of children who have been diagnosed with Autism Spectrum Disorder. First, a quantitative survey of approximately 200 parents of children with ASD who attend ASD centers in five major cities of Pakistan filled the survey. Each participant had the opportunity to fill three scales of religiosity, stress and marital relationships. The distribution of the survey was to be a convenience distribution at these five centers through the designated contact person. However due to COVID-19, the survey was done online through Qualtrics. Each parent's participation was voluntary.

There were no identifying features to the survey and all participants remained anonymous. The survey response data was collected on Qualtrics in a period of three weeks. The Autism Stress Index (APSI) was used to measure the stress level in parents. The Brief RCOPE to measure the positive religious coping and negative religious coping and The Kansas Marital Satisfaction Scale (KMSS) to measure marital quality.

The surveys received was analyzed using descriptive statistics to find measures of frequency, tendency, and variation. Correlation analysis was performed to discover if there are associations between, stress, religiosity and marital satisfaction. Also, hierarchical multiple regressions was conducted to further examine the association between parents'/ level of religiosity, stress and marital satisfaction.

Theoretical Framework.

The purpose of this study was to apply cultural and developmental theories to the study of religiosity's impact on daily life, coping, stress and marital relationship in parents of children with Autism Spectrum Disorder. This study was based on the following theories: Lazarus and Folkman's theory of stress and coping (Lazarus & Folkman, 1984); and Pargament's religious coping theory (Pargament, 1997).

Coping with Family Challenges and Stress

Stress has a different meaning for different people under different conditions. The first and most generic definition of stress is that proposed by Hans Selye: "Stress is the nonspecific response of the body to any demand." (Selye, 1975). According to Dougall and Baum (2001), there is a lack of agreement about how stress should be defined. These definitional inconsistencies can create some difficulty when researchers try to study how a person or family exhibits stress and adjusts to coping outcomes. Stress involves a person expressing feelings and emotions when they are being forced to adapt to a challenging stimulus. Coping involves adaptation to that challenging stimulus. This process is multidimensional and occurs within a community context. A person's stress and coping responses are often influenced by family, institution, community, cultural resources, guiding beliefs, values, and relationships, (Pargament, 1997).

Lazarus and Folkman's (1984) Theory of Stress and Coping. Lazarus and Folkman's (1984) well-known stress and coping theory focused on three main processes occurring when a person experiences stress. First, they theorized that people categorize an event as stressful, and determine the meaning and importance of the stressful event. Second, the event may be identified as one or more of the following: (a) harm or loss; (b) threat, and/or (c) challenge. These categories

influence whether or not a situation is viewed as stressful. Last, the person chooses and implements a coping method to reduce the impact of the stressful event (Lazarus & Folkman, 1984).

Influence of Religion on Coping. Hill et al. (2000) identified the following three criteria of religion:

> *(A) The feelings, thoughts, experiences, and behaviors that arise from a search for the sacred. The term "search" refers to attempts to identify, articulate, maintain, or transform. The term 'sacred' refers to divine being, divine objects, Ultimate Reality, or Ultimate Truth as perceived by the individual; and/or (B) A search for non-sacred goals (such as identity, belongingness, meaning, health, or wellness) in a context that has its primary goal the facilitation of (A); and (C) The means and methods (e.g., rituals or prescribed behaviors) of the search that receive validation and support from within an identifiable group of people (p. 66).*

Religiosity can be defined as the influence of religion on a person's life. This definition specifically focuses on the relationship between the individual and a certain worldview (Verbit, 1970). Pargament, Koenig & Perez (2000) summarized the five main functions of religion as: (a) meaning, (b) control, (c) comfort and spirituality, (d) intimacy and spirituality, and (e) life transformation. When people face challenges, they often use religion as a framework from which to search for meaning. This understood meaning helps with the interpretation of any future possible changes that the person may need to make to adjust to the stressor. Even though people may comprehend the challenge, they may feel that they have no control over the unfolding events. Religion offers a structure and procedures, such as prayer and ritual practices, to help people achieve a sense of control. In addition to dealing with personal challenges, people often use religion to help understand stressful situations in the world around them. They may feel

comforted and less anxious when thinking about the unexpectedness of a potential stressor. Religion also helps develop a sense of intimacy, closeness, and connection to others (Pargament et al., 2000).

Individuals may feel comforted, accepted, or relief from the challenges faced (Pargament, 1996). Other examples of how religion can help one cope and find meaning in stressful events include gaining mastery and control, obtaining comfort and closeness to God, and achieving life transformations. Dimensions of religiosity can be used to reframe stressful situations. Negative events may be seen as positive and having a different meaning (Pargament, 1996). For example, a stressor may be redefined as beneficial, a punishment from God, an act of the devil, or testament to God's influential power. Ritual practices can also offer a sense of purification to those who have transgressed. The practices also may be a type of punishment, sacrifice, isolation, or repentance that serves various functions. A person or family can seek control by collaborating with God, passively deferring to God to manage the stressor, or actively allowing God to control the situation. In addition, mothers and fathers may indirectly ask God to control the stressor or individually manage the stressful circumstance rather than seeking God's assistance (Pargament, 2011).

The religious coping process is completed within a contextual environment that includes the individual's beliefs, practices, goals, and values. These aspects of religion may aid a person or family with limited resources to deal with a stressful event (Pargament & Raiya, 2007). Religious coping has various possible spiritual, psychological, social, and physical outcomes such as anxiety reduction, peace of mind, self-development, and a search for meaning. In addition, religious coping can help individuals increase desire for social intimacy and have a better understanding of God (Pargament, 2011; Pargament & Raiya, 2007).

Pargament (1997) defined religion as "the search for significance related to the sacred" (p. 32). Any materialistic, psychological, social, physical, or spiritual object or variable can be evaluated for its sacred and significant properties. People are motivated to search so they can better understand the object's significance (Pargament, 1997). To cope with a stressful life event was defined as a search for significance in the effort to attain and maximize the sacred. This search offers two possible coping mechanisms: conservational; and transformational (Pargament, 1996). Conservation of religious significance occurs when a person attempts to protect his or her religious beliefs, practices, or community context whose significance may be threatened, harmed or challenged. When the strength of people's religious beliefs, frequency of religious ritual practice participation, and relationship with their community context has been maintained, in spite of danger and challenges, they are conserving the significance of important aspects of religion. Religious beliefs, ritual practices, and community context offer a sense of comfort and intimacy with God. Transformation of religious significance transpires when a person decides that they should modify the strength of his or her religious beliefs, frequency of participation in ritual practices, and involvement within a community context because perhaps these aspects seem inadequate and an invalid source of significance. The individuals begin to search for or modify aspects of their religiosity. Once a new sense of religiosity is established, the person must conserve and protect religious beliefs, ritual practices, and community (Pargament, 1996; 1997). Pargament (1996) noted, "Conservation and transformation are complementary interdependent processes that help guide and sustain the person throughout the life span" (p. 217).

As such, it is important to understand how parents raising a child with Autism Spectrum Disorder cope with their stress and marital relationship in context of their religiosity (Sim,

Cordier, Vaz, Parson and Falkmer, 2017). To understand how the parents religiosity effect their psychological well-being, their world-view, their mode of coping with the stressors, gaining control and acquiring comfort by virtue of their religiosity (Ekas, Whitman & Shivers, 2009).

Assumptions

The central assumption of this study was that positive religiosity has a positive effect on the relationship of parents of children with Autism Spectrum Disorder. The parents understand that positive religiosity will help them perform better in dealing with the stress caused by the challenges of having a child with ASD. For the survey portion of this study, it was assumed self-reported answers will be accurate.

Additionally, it was assumed the sample chosen for the survey is representative of the population of parents who have a child with ASD and represent the overall cultural fabric of the Pakistani society.

Research Questions

RQ1: Is there a difference in stress levels between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ2: Is there a difference in religiosity scores between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ3: Is there a difference in marital satisfaction between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ4: Does religiosity and stress predict marital relationship of parents raising a child with Autism Spectrum Disorder?

Terms

Autism Spectrum Disorder - Deficits in social-emotional reciprocity, ranging, for example, from

abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.

Religion –A set of beliefs concerning the cause, nature, and purpose of the universe, especially when considered as the creation of a superhuman agency or agencies, usually involving devotional and ritual observances, and often containing a moral code governing the conduct of human affairs. The belief in and worship of a superhuman controlling power, especially a personal God or gods.

***Religiosity* –** A term used to refer to excessive involvement in religion or religious activity. Such involvement goes beyond the norm for a person of a similar faith and is often driven more by individual beliefs than the content of the actual religion.

CHAPTER II

LITERATURE REVIEW

Parenting is a very complex task, balancing all aspects of family life and work commitments and recognizing and responding effectively to children as they experience the critical development phases moving towards maturation. Add a developmental disability such as Autism Spectrum Disorder (ASD) to that process and parenting becomes even more challenging. Understandably, the increased caregiving demands experienced by parents of children with ASD can at times seem overwhelming for them. In fact, more and more families must cope with parenting a child with ASD (Dyches et al., 2016), thus it is important to illuminate parents' experiences with these challenging circumstances so that researchers and clinicians can understand, intervene and provide support for not only children with ASD, but for their caregivers as well. Identifying how these parents cope with this stress and its impact on their marital relationships is an important first step. Studies on parents of children with ASD have found religious coping as a significant predictor for dealing with parental stress and marital relationships (Parker, Mandelco, Olsen Roper, Freeborn, & Dyches, 2011).

This literature review presents a description and critique of some of the major categories of variables involved in the study of effect of religiosity on coping stress and

marital relationships of parents of a child with ASD. The variables identified in this study: (a) religious beliefs, ritual practices, and community context; (b) family and parenting processes; (c) autism spectrum disorder; and (d) stress and coping.

Religiosity and Spirituality in Marital Relationships

In the majority of world's cultures, religion and human life have a close relationship. People seek guidance from the divine to regulate their lives and justify the unexplainable events that affect them. Luquius, Brelsford and Rojas-Guyler (2012) found religiosity and spirituality influence various dimensions of life, including physical health and longevity, mental health and happiness, economic wellbeing, and the raising of children. Married couples incorporate religion into their lives according to their theological beliefs and practice. Research conducted during the past 25 years clearly indicates religiosity and spirituality are salient factors in healthy marriages (Mahoney, 2005; Sherkat & Ellison, 1999). Religious practices (private and public religiosity) and spiritual beliefs (spirituality) predict relational outcomes and shape attitudes toward marriage, intimacy, and parenting (Kaslow & Robinson, 1996; Richards & Bergin, 1997; Roper, Juchau, Dyches, & Mandleco, 2008; Stolzenberg, Blair-Loy, & Waite, 1995).

These beliefs can be affected when raising children, especially those with disabilities. Parker, Mandleco, Roper, Freeborn and Dyches (2011) investigated if differences or relationships exist between religiosity, spirituality, and marital relationships when a couple is raising a child with a disability. A questionnaire was completed by 111 parents raising a child with a disability and 34 parents raising typically developing children assessing religiosity, spirituality, and marital relationships. They found parents raising typically developing children scored higher on private and public

religiosity and marital satisfaction than parents raising a child with a disability; mothers scored higher on religiosity variables than fathers. Moreover, mothers' ratings of spirituality and family type (disability or typically developing child) also predicted their ratings of marital conflict. Higher spirituality and raising typically developing children were associated with higher ratings of marital satisfaction for both mothers and fathers. However, spirituality also moderated the relationship between private/public religiosity and marital satisfaction for fathers.

Parker et al. (2011) found that although parenting stress often is higher in families caring for a child with a disability, this stress exists along a continuum and is influenced by a number of factors such as the parents' marital relationship, their religiosity and spirituality. The sources of the stress in parents caring for a child with a disability are varied and complex (Phillips et al., 2016). Parental stress is affected by the influence of a child's diagnosis, the impact of the ASD diagnosis, and the social stigma of having a child with ASD.

Effect of Stress on Parents

Parental stress is a natural consequence of an ASD diagnosis in children (Davis & Carter, 2008; Pottie & Ingram, 2008; Sukmak & Sangsuk, 2018). Parenting children with ASD has been documented to be more stressful than parenting neurotypical children and children with other developmental differences (Ahmad & Dardas, 2015; Juha´sova´, 2015). White (2009) stated that parenting stress in families may arise from several sources. While some stressors may be specifically centered on the child's impairments, others may be more strongly related to the parents' own experiences or the functioning of the entire family. Some of the most stressful factors involved in raising a child with ASD

may be the permanent and pervasive nature of the disability, inadequate resources for social support, or the lack of acceptance from family and peers.

Influence of a Child's Diagnosis of ASD on Parental Stress. A child's diagnosis of ASD is a specific, challenging event faced by many parents. There are multiple forces involved in explaining why parents' well-being might be threatened by their child's ASD diagnosis. The sources of the stress are varied and complex. In a metasynthesis of parents' experiences of advocating for their child with ASD, engaging with service providers was a major stressor for parents (Boshoff, Gibbs, Phillips, Wiles, & Porter, 2016; Russell & Ricci, 2016). In an integrated review of the literature of ninety-eight studies by Bonis and Sawin, (2016) the authors found that parents are in immense stress when they seek an initial diagnosis, search for specialized services for their child and deal with their own personal challenges. In a study of 37 children with ASD and 41 typically developing (TD) children, Costa, Steffgen, and Ferring (2017) found that parental stress could be due to a dynamic interaction between environmental antecedents, person antecedents, and mediating processes. These affect parents' well-being and can have implications for intervention programs.

Difficulty in Obtaining Assistance. Frustration with delays in obtaining a diagnosis is perhaps the most consistent concern for parents finding. A lag of more than two years or more between parent initial concern and diagnosis is not unusual (Bairati et al., 2011; Keenan et al., 2010; Osborne et al., 2008). Jasher et al. (2019) examined parent satisfaction with the neurodevelopmental evaluation process for their child with developmental issues for ASD using the Post Evaluation Satisfaction Questionnaire. They found parent frustration with delays in obtaining a diagnosis as the most consistent

issue. They reported that many parents had concerns about their child's development as young as two years of age, but diagnosis was often several years later. Satisfaction with the diagnostic process declined as the number of professionals it took to get a diagnosis and the wait time increased. However, children born in or after 2006 (the year AAP guidelines were published) were diagnosed on average 35 months earlier than others.

Pre-existing parent stress, as well as stress resulting from the diagnostic process, can influence both satisfaction and resulting participation in therapy (Osborne et al., 2008). If contact with the diagnosing professionals has been aversive, this may lead to higher stress and less parent participation in therapy as well as negative feelings and lack of trust. Moh and Magiati (2012) found that parents of a child with ASD who consulted more professionals during the diagnostic process and who perceived lower levels of collaboration with professionals reported more anxiety about their child.

The diagnosis itself, of course, can be a major source of distress for parents. Although some parents, who were already suspecting ASD or at least a significant delay in development, may view the diagnosis as a relief (Mansell & Morris 2004), most parents experience significant negative emotional states, when confronting the diagnosis; Klein et al. (2011) did in-depth interviews of nine families, four of whom had a child diagnosed with ASD, one to two months after using the services of a Canadian neurodevelopmental diagnostic assessment clinic. All parents found the diagnosticians competent but some wanted more information before the assessment to better prepare for the assessment. They reported feelings of anxiety, self-blame, and grief in reaction to the diagnosis. Readiness to absorb information beyond the ASD diagnostic outcome depended on whether they had previous knowledge of the likely diagnostic outcome.

Altiere and von Kluge (2009) interviewed 52 parents of children with ASD after the initial diagnosis. All of the families reported negative reactions to the diagnosis, including despair, sadness, denial, confusion, anger and loss. Bairati et al. (2011) suggested that the reasons for the negative impact on parental satisfaction might be perception of the evaluation as judgmental, communication of the diagnosis too soon during the evaluation, and the greater likelihood of distressed parents having difficulty expressing their concerns or asking questions about new information.

The Impact of a Diagnosis of ASD. In their research investigating parental stress in parents of children with ASD, Richard and Lisa (2018) indicated after becoming aware of their child's diagnosis, the parents of children with ASD demonstrated greater distress than parents of children with other disabilities. Dempster, Wildman, and Keating (2013) examined the relationship between the effects of diagnosis, stigma and parental help-seeking after diagnosis. They found parents' concerns about stigma related to their child's problem behavior was salient to parents of children with ASD. These social challenges offer an explanation for uniquely difficult parent– child interactions when raising a child with ASD. A parent's lack of social skills could also compromise parental efforts to manage a child's behavior using typical forms of communication. Despite these findings, not all studies are uniform in detecting inverse associations between raising a child with ASD and parent satisfaction.

Using an internet-based questionnaire White (2009) investigated religiosity, parental well-being, stressors in raising a child with ASD and their acceptance of the disorder in a study of 177 parents of children with ASD. Results revealed positive correlations between most of the variables, and the association between stress and well-

being was stronger for parents with lower religiosity. The task of raising a child with an ASD presents parents with significant challenges, stemming from not only the child's problematic behaviors and deficits characteristic of the disorder, but also due to the perplexing nature of ASD and the controversy surrounding its cause and most effective treatments. It is not surprising, therefore, that studies of parents of children with ASD have consistently found that these parents experience higher levels of stress, depression, and anxiety than parents of both typically developing children and children with non-spectrum diagnoses (Bouma and Schweitzer, 1990; Olsson and Hwang, 2001; Sanders and Morgan, 1997; Sharpley et al.,1997).

Crane, Chester and Goddard (2015) surveyed 1047 parents experiences and opinions regarding the process of attaining a diagnosis of ASD for their children. Several factors predicted parents' overall levels of satisfaction with the diagnostic process, including the time taken to receive a diagnosis, satisfaction with the information provided at diagnosis, the manner of the diagnosing professional, the stress associated with the diagnostic process and satisfaction with post-diagnostic support. Post-diagnosis, the support (if any) that was provided to parents was deemed unsatisfactory, and this was highlighted as an area of particular concern among parents. This study of the influence of diagnostic labeling on parental perceptions of children with behavior 'disorders also revealed that parents who had received an official label for their child's condition had more accepting views of their children than parents who were not given a label

There are multiple forces involved in explaining why parents' well-being might be threatened by their child's ASD diagnosis as compared to other disabilities. According to literature reviewed by Serrata (2012), parents of children with ASD face stressors

stemming from changes in the marital relationship and family life; the child's symptoms, including sleep difficulties, behavior problems, and poor social skills; and financial challenges more so than parents of other disabilities. Interestingly, some research indicates that parents of children with ASD demonstrate greater distress than parents of children with other developmental disabilities, perhaps due to the severity and circumstances of the child's condition (Dumas et al., 1991).

Dempster, Wildman, and Keating (2013) studied stigma and help seeking in 115 parents of children four-to-eight years old. They found that parents of children with ASD reported greater depression and stress than did parents of typically developing children or children with Down's syndrome. The researchers hypothesized that this might be due to differences in behavioral challenges that are commonly observed in children with ASD compared with other children. Furthermore, concerns about stigma related to child problem behavior may also be salient to parents of children with ASD (Dempster et al., 2013). Notably, Rodrigue, Morgan, and Geffken (1991) reported that children with ASD displayed more seriously impaired social skills than children with Down's syndrome, who were actually similar to typically developing children in social functioning.

Lyons, Leon, Phelps and Dunleavy (2010) examined the impact of disability severity and parental coping strategies on stress in 77 parents of children with ASD. Children's ASD symptoms and parental coping strategies (task-oriented, emotion-oriented, social diversion, and distraction) were evaluated as predictors of four types of parental stress (parent and family problems, pessimism, child characteristics, and physical incapacity). Parents of children with ASD reported higher levels of parenting stress and higher affective symptoms when compared to parents of typically developing

children and parents of children with other disabilities.

Religion, Spirituality and Faith as a Coping Construct

When facing a crisis or a difficult challenge, people and families often search for answers within their holy scriptures and use religion as a coping mechanism. Prayers can be a guiding and supportive tool that helps couple bond and face challenges. Religiousness is probably the most popular form of spiritual life, related with the human's willingness to go beyond the material sphere. Religious and spiritual coping is an effort by an individual to understand and deal with life stressors in ways related to the sacred or divine powers, in attempts to overcome the stressor based on what is transcendent (Wachholtz and Sambamthoori, 2013).

Religious coping entails positive religious coping and negative religious coping Pargament, Feuille and Burdzy (2011). Individuals who use positive religious coping are likely to seek spiritual support and look for meaning in a traumatic situation. Negative religious coping or spiritual struggle expresses conflict, question, and doubt regarding issues of God and faith. Religion, spirituality, and faith is more than a defense mechanism, rather than inspiring denial, religion stimulates families, helps with coping skills by reinterpretations of negative events, stressors and challenges through the sacred lens.

Tausch et al. (2011) in a qualitative study in a lifespan sample of survivors of Hurricanes Katrina and Rita, attempted to understand the effect of religion as a coping construct during the stressful times of the survivors. Tausch et al. (2011) found that survivors responded to stress using their spiritual beliefs, religiosity and support from the faith community as a coping construct to overcome their stress and struggles.

In addition to social support offered by family, peers and parent training programs, religion may also serve as an important resource (Tarakeshwar & Pargament, 2001). When considered in terms of one's religious involvement and religious beliefs, these two factors may play very distinct roles when dealing with adverse life situations. Integration into a religious community may give people coping with stressful events a sense of belonging and a strong network of social support, as well as practical assistance in meeting day-to-day challenges.

A religious belief system may assist parents of children with ASD in altering their perception of challenging life events, helping them to find meaning in their situation (Davis & Kiang, 2018). It may follow, therefore, that once parents of children with ASD have become accepting of their child's disorder, they may view their situation more positively and more readily accept the child. The authors suggest that coping strategies utilizing religious resources may play a critical role in the relationship between stress and well-being among parents of children with ASD.

Coping of Parental Stress by Fathers and Mothers. Parents of children with ASD experience increased levels of parental stress, often related to the severity of their child's behavior. However, the experience of stress is dependent on how individuals perceive their situation and whether coping strategies are used to manage stress. Responses to stress associated with parenting children with ASD also vary among parents. One common parental response to an ASD diagnosis is sense of loss and feelings of grief (Fernandez- Alca´ntara, Garcia-Caro, Perez-Marfil, & Cruz-Quintana, 2016; Seligman & Darling, 2007). Similar to death-related losses, parents have reported feelings of denial and guilt (Lopez et al., 2018). However, unlike death-related losses,

parents are challenged to develop coping skills to adjust and respond to their child's ASD symptoms. They also have to adjust to the unanticipated reality that their children will develop differently than neurotypical children (Canary, 2008) and identify resources needed for educational and therapeutic care.

ASD related stress in parents can also affect their mental health. Research has illuminated how mothers and fathers respond and cope differently to their children's ASD diagnoses. Tomeny (2017) reported that mothers of children with ASD were at risk to develop depressive and anxiety symptoms based on ASD symptom severity. Davis and Carter (2008) found that fathers' primary stressor was their child's behavioral and interpersonal challenges, while mothers' primary stressor was concerned about their child's capacity for healthy emotion regulation. The mothers and fathers of 59 toddlers surveyed in this study reported feeling symptoms of a depressed mood, with mothers reporting a higher frequently (Davis & Carter, 2008).

Panchal, Joshi and Kumar (2015) examined the impact of ASD severity and parental coping strategies on stress levels in parents of children with ASD. A child's ASD symptoms and parental coping strategies (task-oriented, emotion-oriented, social diversion, and distraction) were evaluated as predictors of four types of parental stress (parent and family problems, pessimism, child characteristics, and physical incapacity). Their study suggested that adjusting to stress and coping varies between mothers and fathers regardless of a child's level of skill. Variables such as family and cultural values, religiosity, community norms, institutional influences (e.g., schools, places of worship), and severity of symptoms may also influence mothers and fathers differently (Darling, Senatore, & Strachan, 2012; Panchal, Joshi, & Kumar, 2015). Collectively, these findings

demonstrate that the distinct characteristics related to raising a child with ASD may hold important implications for the parenting and family context, which highlights the need to examine parents' psychological wellbeing and strategies for coping with this stressful condition (Davis & Kiang, 2018).

Rivard et al. (2014) in their studies on parental stress and coping in families of children with ASD, reported that few studies have systematically examined stress and coping in fathers and the variables related to their stress levels (Bendixen et al. 2011; Flippin and Crais 2011). In a study by Rivard, Terroux, Parent and Mercier (2014), fathers reported higher levels of stress than mothers. Stress levels of both parents were positively correlated with their child's age, intellectual quotient, severity of ASD-related symptoms, and adaptive behaviors. Paternal stress was predicted by the severity of ASD-related symptoms and the child's gender. Although historically mothers have been the primary informants in studies, fathers are increasingly included in research programs, as researchers recognize the importance of paternal involvement (Davis and Carter, 2008). However, even when included in such studies, fathers mainly represent a smaller proportion of respondents than mothers. Most studies that include fathers focus on relatively small and non-equivalent samples, ranging from eleven (Hastings & Johnson, 2001) to 61 (Hastings et al. 2005a, b), a fact that makes it difficult to generalize results to all fathers of young children with ASD.

Brobst, Clapton and Hendrick (2009) in their research compared 25 couples whose children have ASD with 20 couples whose children did not have developmental disorders. Comparisons were made for both stressor (e.g., child's behavior problems) and relational (e.g., relationship satisfaction) variables. Results indicated that parents of

children with ASD experienced more intense child behavior problems, greater parenting stress, and lower marital relationship satisfaction.

Coping with parenting stress has been one of the most frequently researched aspects of family life among families of children with ASD. As increasing numbers of very young children are receiving a diagnosis of ASD (Davis & Carter, 2008), and as children are being diagnosed at younger ages (Charman & Baird, 2002), research of factors that impact parenting stress and coping strategies is needed in order to help families adapt to the challenges of caring for a young child with ASD.

Religion as a Coping Construct. Ganga and Kutty (2013) in their study of influence of religion and religiosity on the positive mental health of young people contend that religion can be considered as a unique aspect of human functioning, which is not easy to discard or easy to explain. The relationship between religion and well-being is a much-explored one. Religion as a coping construct has been shown to have both positive and negative influences on the lives of people. Religion seems to be one important way of having a sense of well-being. Religiously encouraged social support, religious experiences and orientation are often found to co-exist with good mental health (Pargament, Magyar-Russell, & Murray-Swank 2005).

Religion and one's religiosity is rooted in established tradition that arises out of a group of people's common beliefs and practices (Koenig, 2009). A person whose life is based on the teachings of their faith tradition can be referred to as spiritual without necessarily following all ritual practices. Spirituality is considered more personal, something people define for themselves that is largely free of the rules and regulations associated with religion. There are a lot of people who consider themselves spiritual-but-

not-religious, who deny any connection at all with religion and understand spirituality entirely in individualistic, secular terms. In actual sense, religion is the belief system followed by an individual and spirituality as having a positive sense of meaning and purpose in life (Koenig, 2009).

Although specific conceptualizations of religious coping have varied, a commonly used way to measure the construct has been put forth by Pargament and colleagues who argued that religious coping can be distinguished by positive strategies that are indicative of a healthy relationship with God and religion and include items such as "Focused on religion to stop worrying about my problems" and "Sought God's love and care." Research has pointed to a variety of religious coping methods that serve various ends. For example, Pargament et al. (2011) in accumulation to the original work of Pargament (1997) have distinguished three different approaches to responsibility and coping in a stressful situation:

- the *self-directing* approach, in which the individual relies on self rather than on God,
- the *deferring* approach, where the individual places the responsibility for coping on God, and
- the *collaborative coping* approach, where the individual and God are both active partners in coping.

In addition, Pargament (2011) has identified other forms of religious coping, such as benevolent religious appraisals, seeking support from clergy or church members, seeking spiritual support, discontent with congregation and God, negative religious reframing, and expressing interpersonal religious discontent.

Yodachi, Dunning, Savage, and Hutchinson (2017) in their exploratory qualitative approach investigated the role of religion and spirituality in coping with chronic kidney disease in Thailand. They found out that religion and spirituality provided powerful coping strategies that help people with stressful events overcome the associated distress and difficulties. Yodachi (2014) in a study explored religious and spiritual aspects of healing within the psychotherapeutic context in a Malayan setting through an ethnographic approach and thematic analysis of four cases of different religions. This study concluded that patients deal with terminal diseases in using religiosity as a coping mechanism to manage stress and other stressful events in their lives irrespective of their beliefs.

Ting (2012) in her paper on integration of spiritual and religious approaches in psychotherapy using three major religions (Taoism, Buddhism, and Christianity) concluded that religiosity and the means of coping in all cultures is grounded in traditional practices such as festivals, storytelling, moral guidance, grieving rituals and developmental practice. Ting's (2012) findings align with numerous other studies that suggest religion is important to the way people cope with the burden of illness, stress and fear as it provides a cognitive framework that can minimize suffering, increase one's sense of purpose and help people find meaning in illness (Phillips, Cheng & Pargament, 2009).

Jegatheesan, Miller, and Fowler (2010) in an ethnographic study identified multiple functions of religious practices and beliefs. For example, the organizational functions of religion (such as church attendance, prayer, and scriptural study) may supply families with practical aid, spiritual assistance, and religious education that can provide comfort in

time of need. In addition, spirituality (or faith) is described by these authors as more personalized, providing family members with patience, strength, and a belief that God is a supportive partner during daily life. Aman Abbas, Nurunnabi and Bano (2019) state the term religiosity is not easily defined. Various researchers have addressed this notion in a broad sense, associating religious involvement and orientation. Religiosity shows several factors, including experiential, ceremonial, ritual, ideological, consequential, rational, practical, belief or creedal, moral, and cultural factors.

Amadi et al. (2016) assessed the association between religiosity and coping styles with outcome of depression and diabetes in 112 participants and found that cultural and religious beliefs have the potential to greatly influence the coping styles, healthcare services utilization and clinical outcome in every population. Religion has been reported to be the most widely used coping resource (up to 90%) in stressful conditions including physical and mental illnesses (Koenig, 2009). Amadi et al. (2016) concluded that positive coping skills and high intrinsic and extrinsic religiosities, are associated with better treatment outcomes in both stress and depression. Similarly, negative coping strategies are correlated with poorer care outcomes.

A schema of religious beliefs may equip parents with an alternate framework for interpreting their situation, developing coping strategies and finding meaning in seemingly adverse circumstances, using religiosity as a buffer against some stressors, including child behavior problems (Friedrich et al., 1988). Infact, prior research has established that religious coping, particularly positive religious coping, may serve as a useful resource for parents of children with ASD (White, 2009). In theory, conceptual models (e.g., religious stress moderator model, religious stress deterrent model) similarly

suggest that religious coping might provide the tools that individuals can use to withstand various levels of stress (Pargament, 2009).

Religion as a Coping Construct in Parents of Children with ASD

Couples, when facing challenges in respect of their child's disability, often search for answers using religion as a coping mechanism to gain feelings of support. Prayers and scriptures make them feel that their children have given them a purpose (Lee, 2009). Religious coping may serve as a useful resource for parents with ASD and may view the child's disability as 'God's will' (Habib et al., 2017). Positive religious coping helps parents seek meaning in a traumatic situation and maintain a sense of parenting competence in the face of their child's disability (Gail & Guirguis-Younger, 2013).

Researchers (Ekas, Henderson,Thomas and Whitman, 2008; and Henderson, White 2009; Uecker and Stroope, 2016) found that negative religious coping strategies reported by parents of children with ASD were significantly predictive of depressive affect and negative religious outcomes, resulting in lack of increase in spiritual growth and closeness to religion and God. On the other hand positive religious coping was directly associated with stress-related growth and positive religious outcomes, resulting as increase in spiritual growth and closeness to church and God. That is, religion may be both a supportive resource and a source of distress for parents dealing with the challenges of autism (White 2009). Also, as noted by Parker et al. (2011) parents of children with ASD may feel supported or rejected to a greater extent by their personal religious beliefs than by their involvement in religious organizations.

White (2009) surveyed 177 parents of children with ASD about how their religious beliefs affect their well-being and acceptance. Parents with the highest levels of

religiosity also reported the highest levels of acceptance of the child's disorder (r = .203). White found correlations between 1) religiosity and parental well-being, 2) religiosity and acceptance, and 3) stress and well-being scores. In addition, a strong association between stress and well-being was observed for parents with lower religiosity. Parents of children with ASD who relied on positive religious coping strategies (e.g., seeking support from the church, and viewing the child's disability as 'God's will' or an opportunity for spiritual growth) reported more positive changes in their social relationships and coping skills. The results indicated that, when coping with stress, the parents of children with disabilities often gain feelings of support based on religious beliefs and institutions.

Bourke, Howie and Law (2010) in a qualitative study of eight parents of children with developmental disabilities, reported that parents who used religion as a coping resource found it useful in providing a reason for the child's disability; some parents stated that their children gave their lives purpose. Some parents cited prayer as a significant source of strength and peace of mind. Thus, religiosity may impact parents in very distinct ways, whether positively or negatively.

Weyand, O'Laughlin, and Bennett (2013) examined the influence of religious variables such as sanctification of parenting, negative and positive religious coping, and biblical conservatism on the relationship between child behavior problems and parents′ sense of competence among parents of children with ASD. Surveying 139 parents of children with ASD aged 3–12 years they found that positive religious coping was effective in helping parents maintain a sense of parenting competence in the face of their children's behavioral problems. Research has established that positive religious coping may serve as a useful resource for parents of children with ASD (Pargament & Lomax,

2013). In theory, conceptual models (e.g., religious stress moderator model, religious stress deterrent model) similarly suggest that religious coping might provide the tools that individuals can use to withstand various levels of stress in the family.

Research findings have also highlighted many negative aspects of religion for parents of children with disabilities. For example, Pargament and Lomax (2013) found that parents felt that having a child with a disability had decreased their participation in church activities and had distanced them from God and their religion. For many parents, religious involvement may be a source of stress when leaders and congregations offer limited assistance to the family, and do not readily make the accommodations necessary to include the child with a disability in religious activities. Also, having a child with ASD may cause parents to question their religious beliefs, and can elicit feelings of anger toward God or lead parents to believe that their child is a punishment for some wrongdoing (White, 2009).

Research by Ekas, Whitman and Shivers (2009) examined how religious beliefs and religious activities, and spirituality are coping resources used by many mothers of children with ASD. They found that a parent's religiosity can be a resource for these parents and is an important factor associated with adaptation and resilience. Religiosity also provides both a personal and family philosophical context for handling daily events experienced in raising these children. Positive religious coping tends to be associated with more life satisfaction, spiritual growth following stress, and with less psychosomatic symptoms (Bjorck & Thurman, 2007; Pargament et al., 2011, 1998). Unfortunately, negative religious coping is associated with more callousness toward others, psychological distress, depression, and lower quality of life, in addition to lower

life satisfaction and mental and physical health.

Religiosity and Marital Relationships of Parents of Children with ASD

Religiosity effects marital relationships in varying ways. In marriages, religiosity has been associated with positive coping responses, greater conflict resolution, and shared values such as love, care, and forgiveness (Lambert & Dollahite, 2006; Mahoney, 2005). In addition, greater involvement in one's religion appears to dissuade individuals from resorting to maladaptive rather than adaptive methods to resolve marital disputes (Mahoney, 2005). Finally, one's religiosity also seems to offer couples unique strategies to deal with marital conflict. For example, long-married, highly religious couples often say they turn to prayer to help resolve marital conflict (Butler, Stout, & Gardner, 2002).

The way parents cope with the child's disability can have different effects on their family. In a five-year longitudinal study, Hartley et al. (2010) compared the impact on families with and without a child with ASD. The two groups were matched on demographic variables such as ethnicity, mother's education, age, child's gender, age, and birth order. Five years later, 24% of the parents who had a child with ASD were divorced, compared to 14% of parents with a typically developing child. Hartley et al. (2010) hypothesized that a higher divorce rate among parents of children with ASD may have been the result of higher levels of stress.

Partners with dissimilar religious affiliations, beliefs, and practices also have higher divorce rates and lower marital satisfaction than do couples with the same religious backgrounds, implying religiously based differences may increase conflicting interactions (Mahoney, 2005). Marital conflict may also occur depending on the degree to which partners differ in their religiously-based interpretations as well as when one partner

violates a presumably shared religious value (Mahoney, 2005). Interested in knowing if differences or relationships existed between religiosity, spirituality and marital relationships, Parker et al. (2011) surveyed 111 parents of which 17% had children with ASD. They found that religiosity can serve as a source of conflict in marriages. Parents reported that church attendance can become a source of conflict for couples who do not share the same levels of personal commitment. Incompatible religiosity has been related to dissolution of marriages (Mahoney, 2005). For example, the risk of marital dissolution is nearly three times greater when the wife regularly attends religious services but the husband never does (Call & Heaton, 1997; Lambert & Dollahite, 2006). These findings are significant because they demonstrate religiosity can be a source of marital discord, especially when there is a lack of religious congruence (Lambert & Dollahite, 2006).

Parker et al. (2011) found that the quality of the marriage may be compromised in families of children with disabilities and especially children with ASD since the situation increases family stress, which may lead to a dissatisfying and argumentative marital relationship. The study indicates that in families raising a child with ASD there is decreased marital satisfaction and increased marital conflict (Rivers & Stoneman, 2003). Other studies indicate the presence of a child with ASD in a family makes it difficult for parents to maintain the quality of their marriage. In a study by Brobst, Clopton, and Hendrick (2009) parents of children with Autism Spectrum Disorder reported lower levels of relationship satisfaction than did parents of typically developing children. However, substantial variability exists in reported marital adjustment for both spouses. Although many parents raising a child with ASD are satisfied with their marriages, some parents are decidedly negative about their marital quality (Stoneman & Gavidia-Payne,

2006).

Ramisch et al. (2014), in their study of marital success, stated homogamy of marriage partners on any dimension of religiosity - affiliation, attendance, or religious beliefs - promotes a more stable and satisfying marriage ; however, participation in religious activities plays a greater role in marital stability than does denominational affiliation (Call & Heaton, 1997). In contrast, religious affiliation without religious "activity" is not typically a significant factor in marital relationships, whereas shared or similar religious attendance is a correlate of marital stability and quality (Call & Heaton, 1997; Curtis & Ellison, 2002; Marks, 2005). Finally, couples' level of unity about the spiritual purposes of marriage may also influence their level of agreement about key aspects of marriage (Mahoney, 2005).

Ramisch, Onaga and Oh (2014) compared the strengths and variables that contribute to marital successes of twelve couples with children with ASD in contrast to couples with children who are typically developing. Using concept mapping methodology Ramisch, Onaga and Oh's (2014) identified five clusters (1) we communicate, (2) we spend time to be a couple, (3) we do things for ourselves, (4) we have foundational expectations, and (5) we encourage positive qualities for the marriage, (6) we work out our differences, and (7) we care for and love each other. Common perceptions about the factors that help to maintain marriages emerged: communication and foundational expectations. Within the group of husbands with children with ASD, being able to work out differences and having love for their wives also appeared to be important factors for keeping the marital success.

In conclusion, the research depicts that religiosity effects marital relationships.

Religiosity when stimulating positive coping skills that promotes foundational expectations, open communication between couples, working out the differences, caring and having love for each other, spending time to be a couple and doing things for themselves helps in promoting a positive marital relationship. Pargament and Lomax (2013), suggest that with the growth of theory and research on religion, religion as a coping mechanism for marital relationships, religiosity is now presumed as a positive coping skill to support and strengthen families of children with Autism Spectrum Disorder.

Effect of Religiosity on Parents of Children with ASD in Pakistan

Most research looking at the effect of a child with ASD on families, their religiosity and marital relationship have focused on White Euro-American families within the United States (Dyches et al., 2004), studies in other parts of the world are very few less than 6% as compared to studies in United States Canada and Europe, Matson and LoVullo (2009).

Researchers in USA and other European countries must move beyond generalizations of their findings to the other geographic region of the world (Lynch & Hanson, 2004).

Research addressing religiosity, coping and spirituality in Pakistan has been limited to a specific domain of religiosity and its impact on Pakistani society. No previous research has measured the relationships between religious commitment, religious practice, and marital satisfaction in the context of Pakistan. In addition, no studies have focused on how religiosity and marital satisfaction impact families with children with ASD.

Aman et al. (2019) undertook a study, the only research that comes close to

religiosity but with couples only. This research performed the first focalized examination of the influence of spirituality and religiosity on the marital satisfaction of Pakistani Muslim couples and how religious commitment and religious practice strengthens the relationship of married couples. Findings indicated that religious commitment and religious practice are vital for a happy married life.

Anwar, Tahir, Nusrat and Khan (2018) conducted a cross-sectional survey among 339 parents without a child with ASD, residing in Karachi, Pakistan. This study only explored the knowledge, awareness, and perceptions regarding ASD among parents in Karachi, Pakistan. The results indicated that 75% of parents had heard of Autism Spectrum Disorder, with those who knew of someone with the disorder displaying greater awareness. A poor knowledge score on having correct opinions on ASD, its signs and symptoms.

Alqahtani (2012) interviewed Saudi Arabian mothers and fathers of children with ASD or a pervasive developmental disorder-not otherwise specified (PDD-NOS). The mothers believed that their child's developmental disability was a result of (a) frequent medical investigations such as ultrasounds during pregnancy;(b) vitamin deficiency during pregnancy; (c) mothers' feeling guilty because they believed they were emotionally frigid to their children during their early years; (d) early childhood psychological trauma such as the death of the father; or (e) child was not adequately breastfed. A majority of participants identified vaccinations, evil eye, or black magic as the root of their son or daughter's diagnosis. Researchers explained the cultural reasons:

> *According to Muslim beliefs, an evil eye emanates from another person, or rather from the bad soul, which inhabits that individual. Belief that disease comes from the "evil eye" is common across all ethnic and religious groups in Asia, the Middle East and in some parts of Europe. Black magic was reported less*

> *commonly comparing with evil eye. This could be a result of that different cultural understanding about each intervention. Culturally, evil eye is thought to be emanated from humans, black magic, on the other hand, thought to be emanated from supernatural power. As it could be seen, all of these beliefs about autism could be associated with the cultural understanding and explanations (*Alqahtani, 2012, p.17)

Parents also discussed their child's treatments. The most frequent cultural intervention included mothers and fathers reading the Koran or visiting religious healers. These results underline the importance of professionals' being knowledgeable and sensitive to various religious and cultural beliefs that may influence how mothers and fathers interpret their child's diagnosis and subsequently search for treatments.

Marks (2005) in a qualitative study of 76 highly religious Christian, Jewish, Mormon, and Muslim married mothers and fathers were interviewed regarding how and why three dimensions of religion (i.e., faith community, religious practices, and spiritual beliefs) influence marriage in both beneficial and challenging ways. The author identified eight emergent themes that link religion and marriage: (1) the influence of clergy, (2) the mixed blessing of faith community service and involvement, (3) the importance of prayer, (4) the connecting influence of family ritual, (5) practicing marital fidelity, (6) pro-marriage/anti-divorce beliefs, (7) homogamy of religious beliefs, and (8) faith in God as a marital support. Habib, Prendeville, Abdussabur, and Kinsella (2017) using a constructivist interpretive paradigm and a culturally sensitive approach, explored Pakistani immigrant mothers' experiences of parenting a child with ASD while residing in Ireland. Two themes emerged from the analysis – satisfaction and contentment challenges of parenting a child with ASD, and immigrant experiences of parenting. The results reveal the cultural factors that impact on Muslim immigrant mothers in the

western world and how the perception of ASD in Pakistan can have an impact on mother's experiences of parenting a child with ASD and the impact on their marital relationships and expectations of each other.

Research on literature specifically addressing religiosity, coping and spirituality in parents of children with ASD in Pakistan did not bring up any relevant studies. Though, researchers have, investigated the role of religion on families in context to marriage and on the well-being of individuals or society in Pakistan. Literature relevant to research specific to parents raising a child with Autism Spectrum Disorder is void.

Summary

Overall the literature review suggests that religiosity is a coping mechanism for people of all beliefs and religions. Religious coping is a potential predictor of well-being among parents of children with ASD and may act as a moderator of the relationship between stress and well-being by exploring this possibility in the context of parents of children with ASD specifically.

In marriages, religiosity is associated with positive coping responses, greater conflict resolution, and shared values such as love, care, and forgiveness and greater involvement in one's religion appears to dissuade individuals from resorting to maladaptive rather than adaptive methods to resolve marital disputes.

While most research looking at the effect of a child with Autism Spectrum Disorder on families, their religiosity and marital relationship have focused on White Euro-American families within the United States (Dyches et al., 2004). Researchers in USA and other European countries must move beyond generalizations of their findings to the other geographic region of the world (Lynch & Hanson, 2004). Most of the

researchers to have examined the relationship between religiosity and marital satisfaction focused on families living in the United States, Canada, and other first world countries; but there are a dearth of studies representing South Asia including Pakistan. The few studies that been conducted have revealed that religiosity is a vital protector of marital satisfaction (Aman, Nurunnabi & Bano, 2019). This study will help expand our understanding of the relationship between religiosity practices and their impact on marital satisfaction for married Pakistani couples.

CHAPTER III

METHODOLOGY

This research seeks to discover the association of religiosity to the stress and marital relationships of parents with Autism Spectrum Disorder. This study addresses the gap in previous and extant literature in Pakistan.

Research Questions

RQ1: Is there a difference in stress levels between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ2: Is there a difference in religiosity scores between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ3: Is there a difference in marital satisfaction between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ4: Does religiosity and stress predict marital relationship of parents raising a child with Autism Spectrum Disorder?

Research Design

This study will gather data of Pakistani parents who have children with Autism Spectrum

Disorder. A quantitative survey will be distributed to approximately 200 parents of children with ASD who attend Autism Centers in five major cities of Pakistan. The survey will consist of items addressing Religiosity, Stress and Marital relationships. The survey will be distributed by the Program Director of that center, at each of the five Autism Centers.

Target Population

The target population are all Pakistani parents who, at the time of the study, are raising a child, who is aged between 3-10 years old, diagnosed with Autism Spectrum Disorder and their child is attending one of these five autism centers.. The couples will be married more than five years and have at least one child on the Autism spectrum in their family. The parents will have their child attending one of the Autism Centers in the five cities, Karachi, Lahore, Islamabad, Multan and Peshawar in Pakistan. Participants' education level will be high school and above, they will be able to read, write and comprehend English Language. The goal is to have 200 correlated surveys.

Sample Method

The sample method used in this study was a non-probability convenience sample at the ASD Centers where the participants' children attended school. The setting for this research took place at ASD Centers in five metropolitan cities Karachi, Lahore, Islamabad, Multan and Peshawar in Pakistan where approximately 800 students are served. These ASD centers are made up of a diverse student population, and the researcher attempted to recruit participants for this study to closely represent the diversity within the population. The survey data was collected through online Qualtrics Survey tool. There were no identifying features to the survey and all participants remain

anonymous.

After approval from the Oklahoma State University Institutional Review Board and the approval from the Directors of the ASD Centers where the research took place, recruitment began. A contact person (Center Director) was selected from each center, who briefed about the study by email, telephone and in person as needed. The main source of recruitment was the ASD Centers where parents were briefed by the contact person and their willingness to participate in the study was sought.

Center Location	**Frequency of Response**
Karachi (Sindh)	121
Lahore- Multan- Islamabad (Punjab)	139
Peshawar (KPK)	31
Baluchistan	1
Azad Kashmir	3
Total	295

Data Collection and Tools

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion. It enables the researcher to answer stated research questions, test hypotheses, and evaluate outcomes. For this study using Qualtrics closed-ended surveys, the data was collected from parents of children with Autism Spectrum Disorder.

The following procedures were followed to collect the data.

The five ASD Centers in the cities of Karachi (Sind), Punjab (Lahore, Islamabad,

Multan) and Peshawar (KPK) were contacted to seek permission to use these centers for data collection from parents of children with ASD. A point/contact person in each of these centers briefed/oriented about the study, distribution and collection of the survey. The contact person was responsible to answer the queries by the parents without bias. The researchers email and Skype number were given to participants in the study on request for any further queries they seek directly from the researcher.

Once participants (parents) whose children attended that center agreed to take the survey were identified, link to the Qualtrics Survey was provided to each contact person in the ASD Centers to distribute to the parents of children with ASD, when parents signed a Consent Form showing their willingness to participate in the study. A reminder to complete the survey was sent to participants at the seventh day after they received the link to the Qualtrics survey. The contact persons at each facility constantly reminded the parents to undertake the survey. Once the surveys were received the data was entered into SPSS, for analysis.

Data Collection Tools

Three validated surveys measuring stress, religiosity and marital satisfaction were used in the study. The items in the survey include interval/ratio questions consisting of rating scales and Likert scales.

The Autism Parenting Stress Index (APSI)

The Autism Parenting Stress Index (APSI) was used (Appendix A) to measure the stress level in parents. The APSI is designed to assess of how well parents are coping with the demands of ASD care in its manifold aspects. APSI is unique as it measures parenting stress specific to core and co-morbid symptoms of ASD. One advantage of the

APSI is it assesses parenting stress related to multiple aspects of ASD, opening up a view of parenting stress not possible in a world of assessment where these questions are typically asked in isolation. The structure of the APSI permits an assessment of the large degree to which co-morbid symptoms impact parenting stress: two-thirds of the APSI items, and two out of three of the APSI factors refer to co-morbid rather than core features of ASD. It is intended for use by clinicians to identify areas where parents need support with parenting skills, and to assess the effect of intervention on parenting stress.

The APSI identifies areas where parents need support with parenting skills, and to assess the effect of intervention on parenting stress. The thirteen- item APSI uses a rating scale to rate the parents′ stress from 0 to 5, 0 being "*Not stressful*" to 5 being "*So stressful sometimes we feel we can't cope.*" The overall APSI scale score demonstrates acceptable internal consistency and test–retest stability for parents of children with ASD and other developmental disabilities. For APSI the Cronbach's alpha was .827 for overall parental stress scale for children with ASD and .792 on the factors of core autism behaviors (Silva & Schalock, 2012).

The test–retest coefficient was .882. Mean scores on the two administrations were stable across time at 22.22 and 22.28. Thus, APSI demonstrates to be a reliable instrument for measuring parenting stress in young children with ASD (Abidin 1983; Berry 1995; Oster et al. 2002).

The Brief Religious Coping Scale (Brief RCOPE)

The Brief Religious Coping Scale (Brief RCOPE) (Appendix B) is the most commonly used measure of religious coping in the literature; it has helped contribute to the growth of knowledge about the roles religion serves in the process of dealing with

crisis, trauma, and transition. The scale is developed out of Pargament's (1997) program of theory and research on religious coping.

The positive religious coping (PRC) methods reflect a secure relationship with a transcendent force, a sense of spiritual connectedness with others, and a benevolent world view. The negative religious coping (NRC) methods reflect underlying spiritual tensions and struggles within oneself, with others, and with the divine. The Brief Religious Coping Scale (Brief RCOPE) consists of 21 items representing two subscales, eleven items address positive religious coping and ten items focus on negative religious coping (Pargament, Koenig, & Perez, 2000). Individuals indicate the extent to which they use specific methods of religious coping in dealing with a critical life event using a four-point Likert scale ranging from 0 ("not at all"), 1 ("somewhat"), 2 ("quite a bit") and 3 ("a great deal").

Empirical studies have documented the internal consistency of the positive and negative subscales of the Brief RCOPE. The median alpha for the PRC scale was 0.92. The median alpha reported for the NRC scale was 0.81. Further, empirical studies provide support for the construct validity, predictive validity, and incremental validity of the subscales (Pargament, Feuille, & Burdzy, 2011). The Negative Religious Coping subscale, in particular, has emerged as a robust predictor of health-related outcomes.

The Kansas Marital Satisfaction Scale (KMSS)

The Kansas Marital Satisfaction Scale (KMSS) is a quick, easy to administer and score, three-item scale measuring marital quality (Appendix C). The KMMS is a three-item self-report instrument designed to measures marital quality. Items are rated on a seven-point Likert scale, ranging from 1 (extremely dissatisfied) to 7 (extremely

satisfied). Total score range from 3 to 21, with high scores meaning better marital quality. For conceptual and statistical clarity, many marital interaction and marital therapy research measures use a single cutoff score. It was determined that the cutoff score is 17 for the Kansas Marital Satisfaction Scale (KMSS) (Crane, Middleton, & Bean, 2000). The KMSS significantly correlates with CSI-4, HADS-anxiety and HADS depression, indicating an acceptable convergent validity. Convergent validity is good as it helps to establish construct validity when using two different measuring procedures and research methods in the study to collect data about a construct.

Empirical studies document the test reliability and validity of the KMSS scale a mean score of 17.73 ± 3.02. The Cronbach's alpha coefficient for KMSS as 0.901. All corrected item-total correlations and inter-item correlations were in acceptable range, providing further evidence that the KMSS is psychometrically sound and therefore it can be recommended for further use by researchers interested in the context of marital quality.

Analysis

The survey data from these three measures was analyzed using descriptive statistics to find measures of frequency, tendency, and variation. Correlation analysis was performed to discover if there were associations between stress, religiosity and marital satisfaction. Independent t-test was used to test the differences between group means (mothers and fathers) after any other variances in the outcome variable is accounted for. Multiple Regression was used to test how changes in the predictor variable predicts the level of change in the outcome variable. Multiple regression was conducted to further examine the association between parents' level of religiosity, stress and marital

satisfaction.

T-TEST

A t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups, which may be related in certain features. As the t-test is a parametric test, samples should meet certain preconditions, such as normality, equal variances and independence. A t-test is used as a hypothesis testing tool, which allows to test assumption applicable to a population (Kim, 2015).

The t-test is a very versatile statistic: it can be used to test whether a correlation coefficient is different from 0; it can also be used to test whether a regression coefficient, b is different from 0. However it can also be used to test whether two group means are different. (Field, 2009, p. 324). For this study, statistical significance, or the probability that the relationship between the variables is caused by chance, is set at the .05 level. The discussion of the Independent t-test is organized as follows: (a) t-test assumptions, (b) t-test results.

t- test Assumptions

Prior to independent t- tests of the collected data, four assumptions were tested to determine if the data met the assumptions of the test. The assumptions are:

Assumption 1. The observations are independent (Pituch & Stevens, 2015). This assumption refers to all subjects within this study being independent of each other, and subjects are in no way influenced by other subjects within this study. For this study, both parents were independent of each other and responded to the survey questions

individually. They did not respond to the survey questions in pairs or as a group. Both parents were equally exclusive and therefore independent.

Assumption 2. The data is normally distributed (Field, 2013). Table 1.1 shows the descriptive statistics for 37 variables in this example. When observing skewness and kurtosis, the closer to zero would represent a normal distribution. “Positive values of skewness indicate a pile-up of scores on the left of the distribution, whereas negative values indicate a pile-up on the right” (Fields, 2015 p. 170). Additionally, positive numbers on kurtosis indicate a heavy-tailed distribution, and negative numbers indicate a light-tailed distribution (Fields, 2015). However, for analyses for the *F* or *t*-tests (independent and dependent sample *t*-tests, ANOVA, MANOVA, and regressions), normality can be fulfilled if the sample size exceeds 30, and is even more robust if the sample size exceeds 50 (Pituch & Stevens, 2015).

Assumption 3. Data should be measured at the interval level. “You should ensure that variables have roughly normal distributions and are measured at an interval level (which Likert scales are, perhaps wrongly, assumed to be!)” (Fields, 2015 p. 650). A 5-point Likert scale was the instrument used to measure data for APSI, a 4-point Likert scale for Brief RCOPE and a 7-point Likert scale for KMSS. Based on the Likert scale being assumed at the interval level, this satisfied the level of measurement, and satisfied assumption 3.

Assumption 4. Homogeneity of variance. To test these levels, a Levene’s test was conducted. To conduct a Levene’s test, an independent samples t-test was conducted “on the deviation scores; that is, the absolute difference between each score and the mean of

the group from which it came" (Fields, 2015 p. 150). The desired outcome of the Levene's test is non-significant ($p > .05$), and this would indicate variances are roughly equal and the assumption has not been violated. Appendix E is a list of significant tables with results of all Levene's test for significance and non-significant outcomes mothers and fathers. The data showed difference in variance in one item 1 in APSI Scale, , 1 in +ve RCOPE scale , 5 in –ve RCOPE scale and 2 in KMSS scale.

Multiple Regression

Multiple Regression analysis refers to a set of techniques for studying the straight-line relationships among two or more variables. It is used when we want to predict the value of a variable based on the value of two or more other variables. According to Field (2009), "Regression analysis... enables us to predict future [outcomes] based on values of predictive variables" (p. 198). The level of significance is set at $p < .05$, as that is the customary level used when working on significance (Krawthol and Anderson, 2001).

In a multiple regression analysis it is important, for the researcher to check and ensure that the assumption of no multi-collinearity (heavily related variable) had not been violated by having any variables that were too closely related to one another by checking the Pearson Correlation Coefficient, the tolerance level and the variance inflation factor (VIF) values between the three predictive variables (Field, 2009).

Multiple Regression was used to explore, analyze and test the relationship of predictive variables, Gender, APSI and RCOPE as they relate to the dependent variable KMSS in this quantitative study for the research question RQ.4. The multiple regression analysis tested if religiosity and stress predict marital relationship of parents raising a

child with Autism Spectrum Disorder.

Test of Multiple Regression Assumptions

Prior to Multiple Regression tests of the collected data, four assumptions were tested to determine if the data met the assumptions of the test. The assumptions are:

Assumption 1. Sample size. Multiple regression assumes that the number of observations are sufficient and observations are independent (Pituch & Stevens, 2015). One common rule for sample size in multiple regression is that you need 20 records for each predictor variable. In this study, we have three predictor variables so we would need at least 60 records. This rule only applies if the dependent variable is normally distributed, if the dependent variable is not normally distributed it is important to have more than 20 for each independent variable. We have 294 records so we met the assumption for sample size.

Assumption 2. Normality. Regression assumes that variables have normal distribution. Visual inspection of data plots, skewness, kurtosis, and P.P plots gives researchers information about normality, and Kolmogorov-Smirnov tests provide inferential statistics on normality (Osborne& Waters, 2002). The table shows the normality for dependent variable KMSS in this study.

Table 3.1. Test of Normality statistics for KMSS

Tests of Normality					
Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Statistic	df	Sig.	Statistic	df	Sig.

KMSS Score	.184	294	.000	.844	294	.000

a. Lilliefors Significance Correction

To see if the dependent variable KMSS is normally distributed, we interpreted the Shapiro Wilk. We have that value as .001 which is less than point 0.05 so we would assume that this variable is not normally distributed. However, for analyses for the *F* or *t*-tests (independent and dependent sample *t*-tests, ANOVA, MANOVA, and regressions), normality can be fulfilled if the sample size exceeds 30, and is even more robust if the sample size exceeds 50 (Pituch & Stevens, 2015). The sample size for this study was 294 and therefore the assumption of normally distributed data can be satisfied.

Assumption 3. Multicollinearity. To check the assumption of multicollinearity we looked at the correlation table to make sure that we do not have multicollinearity between the predictor variables. If a correlation is greater than 0.7, then we would say that those variables are multicollinear (Fields, 2019). In the Correlation table, APSI correlation with Gender is within bounds -.048, and RCOPE .069 and an RCOPE and Gender .272, all those values are less than 0.7 so we can assume that none of these predictors are multicollinear.

Table 3.2. Correlation statistics for ASI, RCOPE, KMSS and Gender

Correlations

		KMSS Score	Gender	APSI Score	RCOPE Score
Pearson Correlation	KMSS Score	1.000	.151	-.085	.620
	Gender	.151	1.000	-.048	.272

	APSI Score	-.085	-.048	1.000	.069
	RCOPE Score	.620	.272	.069	1.000
Sig. (1-tailed)	KMSS Score	.	.005	.074	.000
	Gender	.005	.	.205	.000
	APSI Score	.074	.205	.	.119
	RCOPE Score	.000	.000	.119	.
N	KMSS Score	294	294	294	294
	Gender	294	294	294	294
	APSI Score	294	294	294	294
	RCOPE Score	294	294	294	294

Additionally we wanted the predictor variables to correlate with the outcome variable at a value greater than 0.3. The (KMSS) outcome variable correlation with Gender is 0.151, APSI - 0.085 and RCOPE is .620. We met the assumption for RCOPE and not for Gender and APSI.

Assumption 4. Linear relationship. To test this assumption we looked at the probability plots. Standard multiple regression can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature (Cohen & Cohen, 1983). Looking at the plots (Appendix E) for the assumption that we have a linear relationship between the independent variables and the dependent variable, we concluded from the probability plot that these points are more or less following this line. Although there are some deviations here they generally do appear to fall this line. Cohen and Cohen (1983) suggest a good range for the standard residual

should not be outside of – 3 to +3. Looking at the scatter plot, we see that except one outlier, none of these points fall outside of negative -3 to +3 either on the x-axis or the y-axis. The assumption is met as none of the values is greater than +3 and the values are less than -3. In Residuals Statistics we looked for the standard residual value, the minimum value is - 3.885 and the maximum value is 2.898. Hence, the assumption of linear relationship was met.

Limitations of the Research Design

As with any research, limitations occur. In this study, while every attempt was made to have a diversified sample size to accurately represent the targeted population, a major limitation was the fact a convenience sample taken at these ASD centers may not adequately represent the larger population of parents who are not sending their children to these centers. Parents who cannot afford to pay the fees reluctantly choose to keep the child at home. Other limitations can be parents who agree to participate may do so because they are better educated and more equipped to deal with ASD. Surveys were created and validated in US. Most research in the United States related to diagnosis, intervention and treatments for children with ASD has focused on White Euro-American families (Dyches, Wilder, Sudweeks, Obiakor, & Algozzine, 2004). Furthermore, the surveys and research of relationship between religiosity, stress and marital relationship created in US (Hunler & Gencoz, 2005), tend to lack generalizability and transferability to other countries that may differ in cultural values, beliefs and practices (Jegatheesan, Miller & Fowler, 2010).

Internal Validity

As in any research, validity is extremely important. Quality of the outcome of the

study can be reduced when there is threat to the internal and external validity during sampling, selection of measuring tools and data collection. Internal validity is the extent to which a study establishes a trustworthy cause-and-effect relationship between a treatment and an outcome. The subsequent factors such as selection bias, attrition, history, maturation and instrumentation will be considered to avoid threat to the internal validity.

In this study, a large number of parents of children with Autism Spectrum Disorder – approximately 200 – were recruited for the survey to avoid selection bias. Recruitment of participants was sought to compile a sample that is demographically representative of the target population. The selection bias was avoided by avoiding self-selection, prescreening of participants and using multiple data sources. The design of the study, while aimed at collecting rich data, is simple enough to avoid injecting any unnecessary variables by using reliable and validated measurement instruments. Additionally, internal validity was maintained throughout data collection and analysis process taking into consideration the factors of history, maturation and attrition. Further seeking continuous advice and guidance from the dissertation committee chair who has experience in research.

External Validity

External validity allows the research to be confident that the results from this study are generally the same as if the study was conducted with a different population (Ferguson, 2004). For this study, Autism Centers in five cities in Pakistan was used for recruiting parent participants. These Centers have parents of children with ASD from different ethnicities, cultures and socio-economic levels. Recruitment of participants for

this study was attempted to compile a sample that represents these elements of diversity by ensuring that the sample of participants were representative of the population. While it might be impossible for these parents to completely represent the parents around the globe, the diversity of these parents should be great enough to provide results that can be generalized to other parents of similar characteristics.

Summary

This research sought to discover the effect of stress and religiosity on the marital relationship of parents of children with Autism Spectrum Disorder. With the relatively high prevalence of families who must cope with having a child with ASD it is important to illuminate parents' experiences with these challenging circumstances and identify opportunities for researchers and clinicians to intervene and provide support for them. Using a quantitative approach, this study gathered data from parents of children with Autism Spectrum Disorder in Autism Centers in five different cities in order to better understand the problem. This research is significant due to its empirical nature of venturing into another country where 95% of the population is Muslims (Pakistan Bureau of Statistics, 2019) who look to their religion to adjust and cope with problems in their lives. Most of the research of parents with ASD has been done in the United States and other European countries. As per the literature this is the first study to include Muslim parents with children with Autism Spectrum Disorder.

CHAPTER IV

RESULTS

This research sought to examine the association of religiosity to the stress and marital relationships of parents with children with Autism Spectrum Disorder. With the continuing increase in the incidence rate of children with ASD, this research wanted to investigate and apply Lazarus and Folkman's (1984) theory of stress and coping, and Pargament's (1997) religious coping theory. This study examined how stress in parents of children with ASD affect their religiosity, marital relationship/stress. This research focused on parents who are living in Pakistan, practice religion as a coping mechanism for the issues in their lives.

Independent samples t-test was used as the quantitative methods for the first three research questions and multiple regression was used for the fourth research question. The data was collected online through Qualtrics from parents in Pakistan. The research questions are as follows:

RQ1: Is there a difference in stress levels between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ2: Is there a difference in religiosity scores between mothers and fathers who

are raising a child with Autism Spectrum Disorder?

RQ3: Is there a difference in marital satisfaction between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ4: Does religiosity and stress predict marital relationship of parents raising a child with Autism Spectrum Disorder.

To answer the first three-research question, independent sample t-test was used to analyze and test the influence of religiosity on coping stress and marital relationship of parents raising a child with ASD in Pakistan. The Autism Parenting Stress Index (APSI), The Brief Religious Coping Scale (Brief RCOPE), and the Kansas Marital Satisfaction Scale (KMSS) were used to seek response from parent via Qualtrics. The dependent variables that were tested were the thirteen items from the APSI scale, 21-items from the Brief RCOPE scale and three-items from the KMSS scale. The independent variables was the gender of the parents, mother (female) and father (male).

This combination of dependent variables was tested in relation to the parents of children with ASD, mothers and fathers, and how they cope with stress using their religiosity as a coping skill. This combination of dependent variables sought to understand the effect of stress and religiosity on the independent variable, mothers and fathers and how they coped with it.

Sample - The sample size for this study was 294 and therefore the assumption of normally distributed data can be satisfied.

Table 4.1. Descriptive Statistics for association of religiosity to the stress and marital relationships of parents with Autism Spectrum Disorder

	APSI-01 Child's social Development	APSI-02 Child's ability Communicate	APSI-03 Tantrums Meltdowns	APSI-04 Aggressive Behavior
Mean	2.81	2.85	2.52	2.15
Median	3.00	3.00	2.00	2.00
Mode	2	2	2	2
Skewness	.503	.376	.631	.793
Ske Error	.142	.142	.143	.142
Kurtosis	-.462	-.569	-.157	.160
Kurt Error	.283	.283	.286	.284
Percent 25	2.00	2.00	2.00	1.00
50	3.00	3.00	2.00	2.00
75	3.25	4.00	3.00	3.00

	APSI-05 Self-injurious Behavior	APSI-06 Difficulty making Transitions	APSI-07 Sleep Problems	APSI-08 Child's Diet
Mean	1.61	2.20	2.06	2.10
Median	1.00	2.00	2.00	2.00
Mode	1	2	1	1
Skewness	-.532	.592	.944	817
Ske Error	.142	.143	.143	.142
Kurtosis	-1.728	-.344	-.075	-.458
Kurt Error	.284	.284	.285	.284
Percent 25	1.00	1.00	1.00	1.00
50	1.00	2.00	2.00	2.00
75	2.00	3.25	3.00	3.00

	APSI-09 Bowel Problems	APSI-10 Potty Training	APSI-11 Closeness to Child	APSI-12 Concern of Acceptance
Mean	1.68	2.53	1.74	3.16
Median	1.00	2.00	1.00	3.00
Mode	1	1	1	3
Skewness	1.542	376	.287	-.117
Ske Error	.142	.143	.143	.142
Kurtosis	1.726	-1.205	.982	-1.048
Kurt Error	.284	.284	.285	.284
Percent 25	1.00	1.00	1.00	2.00
50	1.00	2.00	1.00	3.00
75	2.00	4.00	2.00	4.00

	APSI-13 Concern of Independence	RCOPE-01 Connection With God	RCOPE-02 Sought God's Love	RCOPE-03 Sought help From God
Mean	3.33	3.42	3.45	3.22
Median	3.00	4.00	4.00	3.00
Mode	4	4	4	4
Skewness	-.195	1.305	1.242	-.957
Ske Error	.143	.155	.156	.156
Kurtosis	-1.053	.624	.589	-.052
Kurt Error	.285	.308	.310	.310
Percent 25	2.00	3.00	3.00	3.00
50	3.00	4.00	4.00	3.00
75	4.00	4.00	4.00	4.00

	RCOPE-04 Put plans in Action with God	RCOPE-05 Seeking strength From God	RCOPE-06 Asked Forgiveness of sins	RCOPE-07 Focused on Religion
Mean	3.35	3.27	3.34	3.04
Median	3.00	4.00	4.00	3.00
Mode	4	4	4	4
Skewness	-.976	.966	-1.265	-.496
Ske Error	.155	.155	.155	.155
Kurtosis	-.284	-.204	.379	-.947
Kurt Error	.309	.309	.309	.309
Percent 25	3.00	3.00	3.00	2.00
50	4.00	4.00	4.00	3.00
75	4.00	4.00	4.00	4.00

	RCOPE-08 Support from Mosque	RCOPE-09 Spiritual Support to Family	RCOPE-10 Stuck to Religion practices	RCOPE-11 Put in God's Hand
Mean	2.00	2.38	2.59	3.42
Median	2.00	2.00	3.00	4.00
Mode	1	2	3	4
Skewness	.621	.147	-.155	-1.183
Ske Error	.157	.155	.155	.155
Kurtosis	-1.060	-1.145	1.200	.391
Kurt Error	.312	.309	.309	.309
Percent 25	1.00	2.00	2.00	3.00
50	2.00	2.00	3.00	4.00
75	3.00	3.00	3.00	4.00

	RCOPE-12 Wondered God Abandoned me	RCOPE-13 Felt punished By God	RCOPE-14 Wondered what I did Wrong	RCOPE-15 Questioned God's Love
Mean	1.56	1.65	1.65	1.77
Median	1.00	1.00	1.00	1.00
Mode	1	1	1	1
Skewness	1.543	1.141	1.165	.102
Ske Error	.157	.156	.156	.156
Kurtosis	1.245	.249	.296	-.259
Kurt Error	.312	.310	.310	.311
Percent 25	1.00	1.00	1.00	1.00
50	1.00	1.00	1.00	1.00
75	2.00	2.00	2.00	2.00

	RCOPE-16 My Community Abandoned me	RCOPE-17 Decide Devil Made it Happen	RCOPE-18 Questioned the Power of God	RCOPE-19 Expected God to solve problem
Mean	1.34	1.30	1.37	2.08
Median	1.00	1.00	1.00	2.00
Mode	1	1	1	1
Skewness	2.208	2.384	2.268	.527
Ske Error	.157	.156	.156	.157
Kurtosis	4.042	4.743	3.548	-1.170
Kurt Error	.312	.311	.310	.314
Percent 25	1.00	1.00	1.00	1.00
50	1.00	1.00	2.00	2.00
75	1.00	1.00	3.00	3.00

	RCOPE-20 Pleaded with God	RCOPE-21 Make sense Without God	KMSS-01 Satisfied with Marriage	KMSS-02 Satisfied with Spouse
Mean	3.09	1.37	5.16	5.11
Median	3.00	1.00	6.00	6.00
Mode	4	1	6	6
Skewness	-.809	2.183	-1.104	-.885
Ske Error	.157	.156	.156	.156
Kurtosis	-.582	3.845	.155	-.235
Kurt Error	.312	.312	.311	.311
Percent 25	2.00	1.00	4.00	4.00
50	3.00	1.00	6.00	6.00
75	4.00	1.00	6.00	6.00

	KMSS-03 Pleaded with God
Mean	5.14
Median	6.00
Mode	6
Skewness	-.987
Ske Error	.156
Kurtosis	-.028
Kurt Error	.311
Percent 25	4.00
50	6.00
75	6.00

Table 4.2. Descriptive statistics for mothers and fathers who took Autism Parenting Stress Index (APSI) scale

APSI Scale	Male		Female	
	Mean	SD	Mean	SD
1. Your child's social development	2.78	.971	2.83	1.034
2. Your child's ability to communicate	2.83	1.164	2.86	1.014
3. Tantrums/meltdowns	2.50	.975	2.52	1.055
4. Aggressive behavior (siblings, peers)	2.21	1.032	2.11	.994
5. Self-injurious behavior	1.67	1.076	1.57	.837
6. Difficulty in transitions one activity to another	2.28	.992	2.15	1.010
7. Sleep problems	2.05	1.132	2.07	1.181
8. Your child's diet	2.11	1.184	2.09	1.203
9. Bowel problems (diarrhea, constipation)	1.75	.997	1.64	1.001
10. Potty training	2.71	1.396	2.42	1.372
11. Not feeling close to your child	1.75	1.015	1.74	.960
12. Concern for the future child being accepted	3.16	1.331	3.15	1.292
13. Concern for the future of child living independently	3.38	1.211	3.29	1.242
Total APSI Stress Scores	31.18	14.476	30.44	14.195

Overall fathers (M =31.18, SD = 14.476) scored higher on stress than mothers (M = 30.44, SD = 14.195).

Table 4.3. Descriptive statistics for mothers and fathers who took Brief Religious Coping Scale (Brief RCOPE)

Brief RCOPE Scale	Male		Female	
	Mean	SD	Mean	SD
Positive Religious Coping Subscale Items (RCOPE)				
1. Looked for a stronger connection with God	3.35	.929	3.45	.832
2. Sought God's love and care	3.45	.847	3.45	.759
3. Sought help from God in letting go of my anger	3.14	1.041	3.25	.858
4. Tried to put my plans into action together with God	3.25	.907	3.40	.830
5. Tried to see how God might strengthen me in this situation.	3.14	.978	3.33	.888
6. Asked forgiveness for my sins	3.35	.929	3.33	.984
7. Focused on religion to stop worrying about my problems.	3.01	1.013	3.05	.930
8. Looked for love-concern from the members of my church.	2.01	1.138	2.00	1.098
9. Offered spiritual support to family or friends	2.39	1.025	2.38	1.051
10. Stuck to the teachings and practices of my religion	2.49	1.043	2.64	1.073
11. Did what I could and put the rest in God's hands	3.29	.894	3.48	.767
Negative Religious Coping Subscale Items (RCOPE)				
12. Wondered whether God had abandoned me	1.48	.875	1.60	.936
13. Felt punished by God for my lack of devotion	1.65	.832	1.70	.904
14. Wondered what I did for God to punish me	1.49	.732	1.73	.952
15. Questioned God's love for me	1.68	1.069	1.81	1.089
16. Wondered whether my mosque had abandoned me	1.23	.639	1.40	.775
17. Decided the devil made this happen	1.35	.752	1.27	.695
18. Questioned the power of God	1.28	.831	1.42	.944
19. Didn't do much, expected God to solve my problems for me.	1.82	.996	2.21	1.166
20. Pleaded with God to make things turn out okay	2.77	1.123	3.24	.947
21. Tried to make sense of situation without relying on God.	1.31	.690	1.40	.834
Total Brief RCOPE Scores	**48.93**	**19.283**	**51.54**	**19.312**

Overall mothers (M =51.54, SD = 19.312) scored higher on religiosity than fathers (M = 48.93, SD = 19.283).

Table 4.3. Descriptive statistics for mothers and fathers who took Kansas Marital Satisfaction Scale (KMSS)

KMSS Scale	Male		Female	
	Mean	SD	Mean	SD
1. How satisfied are you with your marriage	5.45	1.588	5.03	1.806
2. How satisfied are you with your husband/wife as a spouse	5.59	1.534	4.90	1.827
3. How satisfied are you with your relationship with your husband/wife	5.52	1.501	4.98	1.879
Total KMSS Stress Scores	**16.56**	**4.623**	**14.91**	**4.112**

Independent sample t-statistics results show overall fathers (M = 16.56, SD = 4.623) are more satisfied with their marriage than mothers (M = 14.91, SD = 4.112).

QUANTITATIVE RESULTS

RQ1: Is there a difference in stress levels between mothers and fathers who are raising a child with Autism Spectrum Disorder?

To test the research question and answer if there is a mean difference in stress levels between mothers and fathers who are raising a child with Autism Spectrum Disorder (ASD), an independent samples t-test was conducted using the Autism Parents Stress Index (APSI) to determine the significance between the mothers and fathers of a child with ASD. The thirteen items in the scale of APSI were tested. See Appendix G for summarized independent t-test results for mothers and fathers for the thirteen items of the scale.

The following are the APSI results of each item for the mothers and fathers.

Results for Stress Caused by Child's Social Development

Table 4.4. T-test results for stress caused by child's social development to parents

	t	df	Sig.(2-tailed)	Mean Difference
Social Development	-.408	292	.684	-.050

The Levene's test of homogeneity is F = .311, p = .578. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance is met. Using survey scores from the Autism Parenting Stress Index Scale (APSI) there was no significant difference in the stress level of mothers and fathers (t_{292} = -.408, p > .05). The effect size ω^2 = .003.

In item one of APSI scale rating how much stress is caused to parents by their child's social development, fathers (M = 2.78, SD = .971) and mothers (M = 2.83, SD = 1.034) did not show any significant difference in stress level, when their child had issues with social development.

Results for Stress Caused by Child's Ability to Communicate

Table 4.5. T-test results for stress caused by child's ability to communicate to parents

	t	df	Sig.(2-tailed)	Mean Difference
Ability to Communicate	-.243	292	.808	-.031

The Levene's test of homogeneity is F = 3.053, p = .082. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers (t_{292} = -.243, p > .05). The effect size ω^2 = -.003.

In item two of APSI scale rating how much stress is caused to parents by their child's ability to communicate, fathers (M = 2.83, SD = 1.164) and mothers (M = 2.86, SD = 1.014) did not show any significant difference in their level of stress when their child has difficulty in communication.

Results for Stress Caused by Child's Tantrums/Meltdowns

Table 4.6. T-test results for stress caused by child's tantrums/meltdowns to parents

	t	df	Sig.(2-tailed)	Mean Difference
Tantrums/Meltdowns	-.138	287	.890	-.017

The Levene's test of homogeneity is F = .743, p = .389. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers (t_{287} = -.138, p > .05). The effect size ω^2 = -.003.

In item three of APSI scale rating how much stress is caused to parents by their

child's tantrums/meltdowns, fathers (M = 2.50, SD =.975) and mothers (M = 2.52, SD = 1.055) did not show any significant difference in their level of stress when their child had tantrums/meltdowns.

Results for Stress Caused by Child's Aggressive Behavior

Table 4.7. T-test results for stress caused by child's aggressive behavior to parents

	t	df	Sig.(2-tailed)	Mean Difference
Aggressive Behavior	.820	291	.413	.100

The Levene's test of homogeneity is F = .271, p = .603. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers (t_{291} = .820, p > .05). The effect size ω^2 = -.001.

In item four of APSI scale rating how much stress is caused to parents by their child's aggressive behavior, fathers (M = 2.21, SD = 1.032) and mothers (M = 2.11, SD = .994) did not show any significant difference in their level of stress when their child has aggressive behaviors.

Results for Stress Caused by Child's Self-Injurious Behavior.

Table 4.8. T-test results for stress caused by child's self-injurious behavior to parents

	t	df	Sig.(2-tailed)	Mean Difference
Self-Injurious Behavior	.891	188.085	.374	.107

The Levene's test of homogeneity is F = 5.379, p =.021. Because p < .05, we reject null hypothesis and conclude that the assumption of homogeneity of variance is not being met. Using survey scores of equal variances not assumed there is no significant difference in the stress level of mothers and fathers ($t_{188.085} = .891$, p > .05). The effect size $\omega^2 = -.001$.

In item five of APSI scale rating how much stress is caused to parents by their child's self-injurious behavior, fathers (M = 1.67, SD = 1.076) and mothers (M = 1.57, SD = .837) did not show any significant difference in their level of stress when their child has self-injurious behavior.

Results for Stress Caused by Child's Difficulty in Making Transitions

Table 4.9. T-test results for stress caused by child's difficulty in transitions to parents

	t	df	Sig.(2-tailed)	Mean Difference
Transition Difficulty	1.082	290	.280	.131

The Levene's test of homogeneity is F = .141, p = .708. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance

being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers ($t_{290} = 1.082$, $p > .05$). The effect size $\omega^2 = .004$.

In item six of APSI scale rating how much stress is caused to parents by their child's difficulty in transitions from one activity to another, fathers (M = 2.28, SD = .992) and mothers (M = 2.15, SD = 1.010) did not show any significant difference in their level of stress when their child has difficulty in transitions from one activity to another.

Results for Stress Caused by Child's Sleep Problems

Table 4.10. T-test results for stress caused by child's sleep problems to parents

	t	df	Sig.(2-tailed)	Mean Difference
Sleep Problems	-.084	289	.933	-.012

The Levene's test of homogeneity is F = .260, p = .610. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers ($t_{289} = -.084$, $p > .05$). The effect size $\omega^2 = -.003$.

In item seven of APSI scale rating how much stress is caused to parents by their child's sleep problems, fathers (M = 2.05, SD = 1.132) and mothers (M = 2.07, SD = 1.181) did not show any significant difference in their level of stress when their child has difficulty in sleeping.

Results for Stress Caused by Child's Diet

Table 4.11. T-test results for stress caused by child's diet to parents

	t	df	Sig.(2-tailed)	Mean Difference
Diet Issues	.112	291	.911	.016

The Levene's test of homogeneity is F = .175, p = .676. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers (t_{291} = .112, p > .05). The effect size ω^2 = -.003.

In item eight of APSI scale rating how much stress is caused to parents by their child's diet, fathers (M = 2.11, SD = 1.184) and mothers (M = 2.09, SD = 1.203) did not show any significant difference in their level of stress when their child has diet issues.

Results for Stress Caused by Child's Bowel Problems

Table 4.12. T-test results for stress caused by child's bowel movements to parents

	t	df	Sig.(2-tailed)	Mean Difference
Bowel Movements	.956	291	.340	.115

The Levene's test of homogeneity is F = .135, p =.713. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being

met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers ($t_{291} = .956$, $p > .05$). The effect size $\omega^2 = -.000$.

In item nine of APSI scale rating how much stress is caused to parents by their child's bowel problems, fathers (M = 1.75, SD = .997) and mothers (M = 1.64, SD = 1.001) did not show any significant difference in their level of stress when their child has difficulty bowel problems.

Results for Stress Caused by Child's Potty Training

Table 4.13. T-test results for stress caused by child's potty training to parents

	t	df	Sig.(2-tailed)	Mean Difference
Bowel Movements	1.709	290	.088	.286

The Levene's test of homogeneity is F = .269, p = .604. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers ($t_{290} = 1.709$, $p > .05$). The effect size $\omega^2 = .007$.

In item ten of APSI scale rating how much stress is caused to parents by their child's ability to be potty trained, fathers (M = 2.71, SD = 1.396) and mothers (M = 2.42, SD = 1.372) did not show any significant difference in their level of stress when their child has difficulty in potty training.

Results for Stress Caused by Not Feeling Close to the Child

Table 4.14. T-test results for stress caused by not feeling close to the child by the parents

	t	df	Sig.(2-tailed)	Mean Difference
Closeness to Child	.069	288	.945	.008

The Levene's test of homogeneity is F= .011, p = .918. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers (t_{288} = .069, p > .05). The effect size ω^2 = -.003.

In item eleven of APSI scale rating how much stress is caused to parents by not feeling close to their child, fathers (M = 1.75, SD = 1.015) and mothers (M = 1.74, SD = .960) did not show any significant difference in their level of stress caused by not feeling close to their child.

Results for Stress Caused by Concern for the Child's Acceptance by Others

Table 4.15. T-test results for stress caused concerning the child's acceptance by others to parents

	t	df	Sig.(2-tailed)	Mean Difference
Acceptance by Others	.067	291	.946	.011

The Levene's test of homogeneity is F= .488, p = .485. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers (t_{291} = .067, p > .05). The effect size ω^2 = -.003.

In item twelve of APSI scale rating how much stress is caused to parents concerning their child's acceptance by others, fathers (M = 3.16, SD = 1.331) and mothers (M = 3.15, SD = 1.292) did not show any significant difference in their level of stress caused by concern for their child's acceptance by others.

Results for Stress Caused by Concern for the Child's Future of Living Independently

Table 4.16. T-test results for stress caused concerning the child's future to parents

	t	df	Sig.(2-tailed)	Mean Difference
Child's Future	.598	289	.550	.089

The Levene's test of homogeneity is F= .735, p =.392. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the APSI there was no significant difference in the stress level of mothers and fathers (t_{289} = .598, p > .05). The effect size ω^2 = -.003.

In item thirteen of APSI scale rating how much stress is caused to parents concerning their child's future of living independently, fathers (M = 3.38, SD = 1.211)

and mothers (M = 3.29, SD = 1.242) did not show any significant difference in their level of stress when they had concerns for the child's future of living independently.

RQ2: Is there a difference in religiosity scores between mothers and fathers who are raising a child with Autism Spectrum Disorder?

To answer if there is a mean difference in religiosity scores between mothers and fathers who are raising a child with Autism Spectrum Disorder (ASD). An independent samples t-test was conducted using the Brief Religious Coping Scale (Brief RCOPE), to determine the significance between the mothers and fathers of a child with ASD. The Brief Religious Coping Scale (Brief RCOPE) consists of 21 items representing two subscales, eleven items address positive religious coping and ten items focus on negative religious coping (Pargament, Koenig, & Perez, 2000). The 21 items in the scale of RCOPE were tested. See Appendix G for summarized independent t-test results for mothers and fathers for the 21 items of the Brief RCOPE scale.

The following are the results of each item for the mothers and fathers.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.17. T-test results for parents looking for a stronger connection with God

	t	df	Sig.(2-tailed)	Mean Difference
Connection with God	-.872	246	.384	-.102

The Levene's test of homogeneity is F = 1.482, p =.225. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{246} = -.872$, p > .05). The effect size $\omega^2 = -.001$.

In item one of Brief RCOPE scale rating how parents coped when they looked for a stronger connection with God, fathers (M = 3.35, SD = .929) and mothers (M = 3.29, SD = .832) did not show any significant difference in their level of coping when they looked for a stronger connection with God.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.18. T-test results for parents seeking God's love and care

	t	df	Sig.(2-tailed)	Mean Difference
God's love and Care	-.029	242	.977	-.003

The Levene's test of homogeneity is F = .705, p = .402. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{242} = -.029$, p > .05). The effect size $\omega^2 = -.004$.

In item two of Brief RCOPE scale rating how parents coped by seeking God's

love and care, fathers (M = 3.45, SD = .847) and mothers (M = 3.45, SD = .759) did not show any significant difference in their level of coping when they sought God's love and care.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.19. T-test results for parents seeking God's help to let go of anger.

	t	df	Sig.(2-tailed)	Mean Difference
God's Help-Let go of Anger	-.827	127.878	.410	-.112

The Levene's test of homogeneity is F = 6.149, p = .014. Because $p < .05$, we reject null hypothesis and conclude that the assumption of homogeneity of variance is not being met. Using survey scores from equal variances not assumed the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{127.878} = - .827$, $p > .05$). The effect size $\omega^2 = -.001$.

In item three of Brief RCOPE scale rating how parents sought God's help to let go anger, fathers (M = 3.14, SD = 1.041) and mothers (M = 3.25, SD = .858) did not show any significant difference in their level of coping when they sought God's help to let go of anger.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.20. T-test results for parents putting plans together with God

	t	df	Sig.(2-tailed)	Mean Difference
Plans with God	-1.267	244	.206	-.148

The Levene's test of homogeneity is F = 1.203, p = .274. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers (t_{244} = - 1.267, p > .05). The effect size ω^2 = .002.

In item four of Brief RCOPE scale rating how parents tried putting plans into action with God, fathers (M = 3.25, SD = .907) and mothers (M = 3.40, SD = .830) did not show any significant difference in their level of coping when they tried putting plans into action with God.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.21. T-test results for parents seeing how God might be strengthening them

	t	df	Sig.(2-tailed)	Mean Difference
Strengthening by God	-1.537	245	.126	-.192

The Levene's test of homogeneity is F = 1.793, p =.182. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance

being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{245} = -1.537$, $p > .05$). The effect size $\omega^2 = .005$.

In item five of Brief RCOPE scale rating when parents tried to see how God was strengthening them, fathers (M = 3.14, SD = .978) and mothers (M = 3.33, SD = .888) did not show any significant difference in their level of coping when they tried to see how God was strengthening them.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.22. T-test results for parents asking forgiveness of their sins from God

	t	df	Sig.(2-tailed)	Mean Difference
Forgiveness of Sins	.157	245	.875	.021

The Levene's test of homogeneity is F = .785, p = .376. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{245} = .157$, $p > .05$). The effect size $\omega^2 = -.004$.

In item six of Brief RCOPE scale rating when parents asked forgiveness of their sins from God, fathers (M = 3.35, SD = .929) and mothers (M = 3.33, SD = .984) did not show any significant difference in their level of coping when asking forgiveness for their

sins from God.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.23. T-test results for parents focusing on religion to stop worries

	t	df	Sig.(2-tailed)	Mean Difference
Focus on Religion	-.272	245	.786	-.035

The Levene's test of homogeneity is F = 1.970, p =.162. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{245} = -.272$, p > .05). The effect size $\omega^2 = -.004$.

In item seven of Brief RCOPE scale rating when parents focused on religion to stop worrying, fathers (M = 3.01, SD = 1.013) and mothers (M = 3.05, SD = .930) did not show any significant difference in their level of coping when focusing on religion to stop worrying about their child.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.24. T-test results for parents looking for love and concern from the Mosque

	t	df	Sig.(2-tailed)	Mean Difference

Support from Mosque	.083	239	.934	.013

The Levene's test of homogeneity is F = .439, p =.508. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{239} = .083$, p > .05). The effect size $\omega^2 = -.004$.

In item eight of Brief RCOPE scale rating when parents looked for love-concern from members of their mosque, fathers (M = 2.01, SD = 1.138) and mothers (M = 2.00, SD = 1.098) did not show any significant difference in their level of coping when looking for love-concern from members of their mosque.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.25. T-test results for parents offering spiritual support to family or friends

	t	df	Sig.(2-tailed)	Mean Difference
Supporting Family & Friends	.072	245	.942	.010

The Levene's test of homogeneity is F = .051, p =.821. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{245} = .072$, p > .05). The effect size $\omega^2 = -.004$.

In item nine of Brief RCOPE scale rating when parents offered spiritual support to family and friends, fathers (M = 2.39, SD = 1.025) and mothers (M = 2.38, SD = 1.051) did not show any significant difference in their level of coping when offering spiritual support to family and friends.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.26. T-test results for parents sticking to the teachings of their religion

	t	df	Sig.(2-tailed)	Mean Difference
Stick to Religious Belief	-1.085	244	.279	-.157

The Levene's test of homogeneity is F = .117, p =.732. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{244} = -1.085$, $p > .05$). The effect size $\omega^2 = .001$.

In item ten of Brief RCOPE scale rating how parents stuck to teaching-practices of their religion, fathers (M = 2.49, SD = 1.043) and mothers (M = 2.64, SD = 1.073) did not show any significant difference in their level of coping when sticking to their religions' teaching-practices.

Results for + ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.27. T-test results for parents doing their part and putting the rest in God's hand

	t	df	Sig.(2-tailed)	Mean Difference
Putting in God's Hand	-1.609	134.178	.110	-.188

The Levene's test of homogeneity is F = 4.309, p =.039. Because p < .05, we reject null hypothesis and conclude that the assumption of homogeneity of variance not being met. Using survey scores of equal variances not met from the t-table from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{134.178}$ = -1.609, p > .05). The effect size ω^2 = .006.

In item eleven of Brief RCOPE scale rating when parents did what they could and then put rest in God's hands, fathers (M = 3.29, SD = .894) and mothers (M = 3.48, SD = .767) did not show any significant difference in their level of stress when putting their trust in God's hands.

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.28. T-test results for parents wondering if God had abandoned them

	t	df	Sig.(2-tailed)	Mean Difference
Abandoned by God	-.937	239	.350	-.118

The Levene's test of homogeneity is F = 1.404, p =.237. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance

being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{239} = -.937$ $p > .05$). The effect size $\omega^2 = -.001$.

In item twelve of Brief RCOPE scale rating when parents wondered if God had abandoned them, fathers (M = 1.48, SD = .875) and mothers (M = 1.60, SD = .936) did not show any significant difference in their level of stress when they wondered whether God had abandoned him/her.

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.29. T-test results for parents felt punished by God for lack of devotion

	t	df	Sig.(2-tailed)	Mean Difference
Punished by God	-1.218	242	.224	-.148

The Levene's test of homogeneity is F = .874 p =.351. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE I there was no significant difference in the coping level of mothers and fathers ($t_{242} = -1.218$, $p > .05$). The effect size $\omega^2 = .002$.

In item thirteen of Brief RCOPE scale rating when parents felt punished by God for lack of devotion, fathers (M = 1.55, SD = .832) and mothers (M = 1.70, SD = .904) did not show any significant difference in their level of stress when they felt punished by God for lack of devotion.

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.30. T-test results for parents wondering what they did for God to punish them

	t	df	Sig.(2-tailed)	Mean Difference
Wondering Why Punished	-2.109	194.888	.036	-.234

The Levene's test of homogeneity is F = 11.138, p = .001. Because p< .05, we reject null hypothesis and conclude that the assumption of homogeneity of variance not being met. Using equal variances not assumed scores from the Brief RCOPE there is significant difference in the coping level of mothers and fathers ($t_{194.888}$ = - 2.109, p <.05). About 1.4% of the variance in religious coping between mothers and fathers was explained by the parents wondering what they did for God to punish them (ω^2 = .014).

In item fourteen of Brief RCOPE scale rating mothers (M = 1.73, SD = .952) scored higher on wondering what they did for God to punish them than fathers (M = 1.49, SD = .732).

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.31. T-test results for parents questioning God's love for them

	t	df	Sig.(2-tailed)	Mean Difference
Questioning God's Love	-.860	241	.391	-.127

The Levene's test of homogeneity is F = .217, p =.642. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{241} = -.860$, p > .05). The effect size $\omega^2 = -.001$.

In item fifteen of Brief RCOPE scale rating parents questioned God's love for them, fathers (M = 1.68, SD = 1.069) and mothers (M = 1.81, SD = 1.089) did not show any significant difference in their level of coping when they questioned the God's love for them.

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.32. T-test results for parents wondering if their Mosque has abandoned them

	t	df	Sig.(2-tailed)	Mean Difference
Abandoned by Community	-1.774	184.022	.078	-.167

The Levene's test of homogeneity is F = 8.831, p =.003. Because p <.05, we reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using equal variances not assumed scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{239} = - 1.774$, p > .05). The effect size $\omega^2 = .009$.

In item sixteen of Brief RCOPE scale rating when parents wondered if their Mosque has abandoned them, fathers (M = 1.23, SD = .639) and mothers (M = 1.40, SD = .775) did not show any significant difference in their level of stress when they felt abandonment by their Mosque.

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.33. T-test results for parents deciding the devil made this happen

	t	df	Sig.(2-tailed)	Mean Difference
Connection with God	.819	241	.414	.080

The Levene's test of homogeneity is F = 1.482, p =.225. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{241} = .819$, p > .05). The effect size $\omega^2 = -.001$.

In item seventeen of Brief RCOPE scale rating when parents decided the devil made this happen, fathers (M = 1.35, SD = .752) and mothers (M = 1.27, SD = .695) did not show any significant difference in their level of coping when they blamed the devil for this to happen.

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.34. T-test results for parents questioning the power of God

	t	df	Sig.(2-tailed)	Mean Difference
Questioning God's Power	-1.175	172.775	.242	-.140

The Levene's test of homogeneity is F = 4.261, p =.040. Because p < .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using equal variances not assumed scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{172.775}$ = - 1.175, p > .05). The effect size ω^2 = .006.

In item eighteen of Brief RCOPE scale rating parents questioned the power of God, fathers (M = 1.28, SD = .831) and mothers (M = 1.42, SD = .944) did not show any significant difference in their level of coping when they questioned the power of God.

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.35. T-test results for parents expected God to solve their problem

	t	df	Sig.(2-tailed)	Mean Difference
Connection with God	-2.685	172.603	.008	-.392

The Levene's test of homogeneity is F = 8.197, p =.005. Because p < .05, we reject null hypothesis and conclude that the assumption of homogeneity of variance not

being met. Using equal variances not assumed scores from the Brief RCOPE there a significant difference in the coping level of mothers and fathers ($t_{172.603} = -2.685$, $p < .05$).

About 2.5% of the variance in religious coping between mothers and fathers was explained by the parents expecting God to solve their problem ($\omega^2 = .025$).

In item nineteen of Brief RCOPE scale rating mothers (M = 2.21, SD = 1.166) scored higher on expecting God to solve their problem than fathers (M = 1.82, SD = .996).

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.36. T-test results for parents pleading with God to make things okay

	t	df	Sig.(2-tailed)	Mean Difference
Pleading with God	-3.232	128.592	.002	-.478

The Levene's test of homogeneity is F = 5.650, p =.018. Because $p < .05$, we reject null hypothesis and conclude that the assumption of homogeneity of variance not being met. Using equal variances not assumed scores from the Brief RCOPE there is a significant difference in the coping level of mothers and fathers ($t_{128.592} = -3.232$, $p < .05$). About 3.8% of the variance in religious coping between mothers and fathers was explained for parents pleading with God to make things okay ($\omega^2 = .038$).

In item twenty of Brief RCOPE scale rating parents pleaded with God to make

things okay, mothers (M = 3.24, SD = .947) scored higher than fathers (M = 2.77, SD = 1.123).

Results for - ve Brief RCOPE Measure of Religious Coping for Parents

Table 4.37. T-test results for parents trying to make sense of situation without relying on God

	t	df	Sig.(2-tailed)	Mean Difference
Making Sense without God	-.871	240	.385	-.095

The Levene's test of homogeneity is F = 3.085, p =.080. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the Brief RCOPE there was no significant difference in the coping level of mothers and fathers ($t_{240} = -.871$, p > .05). The effect size $\omega^2 = -.001$.

In item twenty-one of Brief RCOPE scale rating when parents tried to make sense of the situation with God, fathers (M = 1.31, SD = .690) and mothers (M = 1.40, SD = .834) did not show any significant difference in their level of coping trying to make sense of the situation with God.

RQ3: Is there a difference in marital satisfaction between mothers and fathers who are raising a child with Autism Spectrum Disorder?

To answer if there is a mean difference in marital satisfaction scores between

mothers and fathers who are raising a child with Autism Spectrum Disorder (ASD). An independent samples t-test was conducted using the Kansas Marital Satisfaction Scale (KMSS), to determine the significance between the mothers and fathers of a child with ASD. The Kansas Marital Satisfaction Scale (KMSS) consists of three items. The three items in the scale of KMSS were tested. See Appendix G for summarized independent t-test results for mothers and fathers for the three items of the KMSS scale.

The following are the results of each item for the mothers and fathers.

Results for KMSS Measure of Marital Satisfaction

Table 4.38. T-test results for how satisfied are you with your marriage

	t	df	Sig.(2-tailed)	Mean Difference
Satisfaction with Marriage	1.751	241	.081	.424

The Levene's test of homogeneity is F = 3.332, p =.069. Because p > .05, we fail to reject null hypothesis and conclude that the assumption of homogeneity of variance being met. Using survey scores from the KMSS there was no significant difference in the marital satisfaction level of mothers and fathers ($t_{241} = 1.751$, p > .05). The effect size $\omega^2 = .008$.

In item one of KMSS scale rating how satisfied are you with your marriage, fathers (M = 5.45, SD = 1.588) and mothers (M = 5.03, SD = 1.806) did not show any significant difference in their level of marital satisfaction.

Results for KMSS Measure of Marital Satisfaction

Table 4.39. T-test results for how satisfied are you with your husband/wife as a spouse

	t	df	Sig.(2-tailed)	Mean Difference
Responsibility of Spouse	3.039	167.567	.003	.688

The Levene's test of homogeneity is F = 6.189, p =.014. Because p < .05, we reject null hypothesis and conclude that the assumption of homogeneity of variance not being met. Using equal variances not assumed scores from the KMSS there is a significant difference in the marital satisfaction level of mothers and fathers ($t_{167.567} = 3.039$, $p < .05$). About 3.3% of the variance in marital satisfaction between mothers and fathers was explained for satisfaction with their spouses responsibilities as a spouse ($\omega^2 = .033$).

In item two of KMSS scale rating how satisfied are you with your husband/wife as a spouse, fathers (M = 5.59, SD = 1.534) scored higher than mothers (M = 4.90, SD = 1.827).

Results for KMSS Measure of Marital Satisfaction

Table 4.40. T-test results for how satisfied are you with your relationship with your spouse

	t	df	Sig.(2-tailed)	Mean Difference
Relationship with Spouse	2.406	175.702	.017	.544

The Levene's test of homogeneity is F = 6.989, p =.009. Because p < .05, we reject null hypothesis and conclude that the assumption of homogeneity of variance not being met. Using equal variances not assumed scores from the KMSS there is a significant difference in the marital satisfaction level of mothers and fathers ($t_{175.702}$ = 2.406, p < .05). About 1.9% of the variance in marital satisfaction between mothers and fathers was explained for satisfaction with their relationship with their spouse (ω^2 = .019).

In item three of KMSS scale rating how satisfied are you with your relationship with your husband/wife, fathers (M = 5.52, SD = 1.501) scored higher than mothers (M = 4.98, SD = 1.879).

Results for Multiple Regression Test for RQ 4.

RQ4: Does religiosity and stress predict marital relationship of parents raising a child with Autism Spectrum Disorder.

To answer this question, we used multiple regression to predict the effect of stress (APSI scores) and religiosity (RCOPE scores) on the marital relationship (KMSS scores) of parents raising a child with ASD. The predictors or the independent variables are the scores of the Autism Parenting Stress Index (APSI), Brief RCOPE and Gender to predict the criterion variable or dependent variable Kansas Marital Satisfaction Scale (KMSS).

Following is the result of the SPSS Multiple regression test.

Table 4.41. Descriptive Statistics for association of religiosity to the stress and marital relationships of parents with Autism Spectrum Disorder

Descriptive Statistics

	Mean	Std. Deviation	N
KMSS Score	12.74	7.425	294
Gender	1.63	.485	294
APSI Score	30.53	8.362	294
RCOPE Score	42.15	20.057	294

Table 4.42.Correlation Statistics for association of religiosity to the stress and marital relationships of parents with Autism Spectrum Disorder

Correlations

		KMSS Score	Gender	APSI Score	RCOPE Score
Pearson Correlation	KMSS Score	1.000	.151	-.085	.620
	Gender	.151	1.000	-.048	.272
	APSI Score	-.085	-.048	1.000	.069
	RCOPE Score	.620	.272	.069	1.000
Sig. (1-tailed)	KMSS Score	.	.005	.074	.000
	Gender	.005	.	.205	.000
	APSI Score	.074	.205	.	.119
	RCOPE Score	.000	.000	.119	.
N	KMSS Score	294	294	294	294
	Gender	294	294	294	294
	APSI Score	294	294	294	294
	RCOPE Score	294	294	294	294

*Table 4.43. Variables Entered/Removed statistics for APSI, RCOPE, KMSS and Gende***r**

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	RCOPE Score, APSI Score, Gender[b]	.	Enter

a. Dependent Variable: KMSS Score
b. All requested variables entered.

The first table "Variables Entered/Removed[a]" confirms that we had the variables gender, APSI and RCOPE as our predictors, and then our dependent variable or criterion variable, was KMSS.

In the table of Model Summary we focus on R square, the value of R squared is equal to .40 (rounded from .402). Taken as a set the predictors APSI, RCOPE and gender, account for 40% of the variance in the KMSS.

Table 4.44.Model Summary statistics for APSI, RCOPE, KMSS and Gender

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.634	.402		.396

a. Predictors: (Constant), RCOPE Score, APSI Score, Gender

This R squared .40 is a measure of the amount of variance in the dependent variable that the independent variables or predictors account for when taken as a group.

Next, we looked at the ANOVA table. The ANOVA test looks whether this R squared is significantly greater than zero.

Table 4.45. ANOVA statistics for APSI, RCOPE, KMSS and Gender

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6492.958	3	2164.319	64.965	.000[b]
	Residual	9661.396	290	33.315		
	Total	16154.354	293			

a. Dependent Variable: KMSS Score
b. Predictors: (Constant), RCOPE, APSI Score, Gender

Since the p value .001 is less than .05 ($p < .05$), we know that this value of R-squared .40 is significantly greater than 0, and that means that our predictors are able to account for a significant amount of variance in KMSS. This means that the regression model is significant.

The overall model is significant, F (3, 290) = 64.97, $p < .001$, $R^2 = .40$

Following are the results of the Coefficient table, which looks at each of the predictors individually.

Table 4.46. Coefficients statistics for APSI, RCOPE, KMSS and Gender

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	7.033	1.773		3.966	.000
	Gender	-.437	.725	-.029	-.603	.547
	APSI Score	-.115	.041	-.130	-2.846	.005
	RCOPE Score	.236	.018	.637	13.450	.000

. Dependent Variable: KMSS Score

Coefficient Table. (test using alpha = .05)

For Gender t value is -.603, p .547 > .05 hence it is not a significant predictor of KMSS.

For APSI t value is - 2.846, p .005 < .05 hence it is a significant predictor of KMSS.

For RCOPE t value is 13.450, p .001 < .05 hence it is a significant predictor of KMSS.

The predictors APSI and KMSS both at individual level account for a significant amount of unique variance in KMSS.

Summary

Independent samples t-test and multiple regression were used as the quantitative methods. The research questions are as follows:

RQ1: Is there a difference in stress levels between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ2: Is there a difference in religiosity scores between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ3: Is there a difference in marital satisfaction between mothers and fathers who are raising a child with Autism Spectrum Disorder?

RQ4: Does religiosity and stress predict marital relationship of parents raising a child with Autism Spectrum Disorder.

For the Autism Parental Stress Index Scale (13 items) the independent-test results indicate there was no statistically significant difference between the mothers and fathers who are raising a child with ASD on all thirteen items.

For the Brief Religious Coping Scale (21items) the independent-test results indicate there was no statistically significant difference between the mothers and fathers who are raising a child with ASD on eighteen of the twenty-one items.

The independent t-test results indicate there was a statistically significant difference between the mothers and fathers who are raising a child with ASD in religious coping when wondering what they did for God to punish them. ($t_{194.888} = -2.109$, $p < .05$).

The independent t-test results indicate there was a statistically significant difference between the mothers and fathers who are raising a child with ASD in religious coping when expecting God to solve their problem ($t_{172.603} = -2.685$, $p < .05$).

The independent t-test results indicate there was a statistically significant difference between the mothers and fathers who are raising a child with ASD in religious coping when pleading with God to make things okay ($t_{128.592} = -3.232$, $p < .05$).

For the Kansa Marital Satisfaction Scale (3items) the independent-test results indicate there was a statistically significant difference between the mothers and fathers who are raising a child with ASD on two of the three scale items.

The independent t-test results indicate there was a statistically significant difference between the mothers and fathers who are raising a child with ASD in marital satisfaction level of mothers and fathers with their spouse's responsibilities as a spouse ($t_{167.567} = 3.039$, $p < .05$).

The independent t-test results indicate there was a statistically significant difference between the mothers and fathers who are raising a child with ASD in marital satisfaction level of mothers and fathers with their relationship with their spouses ($t_{175.702.567} = 2.406$, $p < .05$).

Multiple regression analysis was run to determine if stress and religious coping predicted marital satisfaction. In multiple regression test result indicated overall the model is significant, F (3, 290) = 64.97, p < .001, R^2 = .40. The predictors APSI and RCOPE were able to account for a significant amount of variance in KMSS.

CHAPTER V

CONCLUSION

The purpose of this study was to gain a better understanding of the influence of religiosity on coping stress and marital relationship of Pakistani parents raising a child with ASD in Pakistan. Using cultural and developmental theories of Lazarus and Folkman's theory of stress and coping (Lazarus & Folkman, 1984); and Pargament's religious coping theory (Pargament, 1997) as the theoretical framework, the study examined how stress and religiosity in parents of children with Autism Spectrum Disorder affect their marital relationship. This chapter concludes the research by discussing quantitative data analysis, and summarizes the results as applied to the research questions. Limitations and recommendations for future research on parental stress, religiosity, and marital relationships are also explored.

Research Questions

Findings Applied to RQ1

Is there a difference in stress levels between mothers and fathers who are raising a child with Autism Spectrum Disorder?

Even though there was no significant difference in stress levels between Pakistani mothers and fathers on any of the thirteen scale items of the Autism Parental Stress Index. However, looking at the overall group mean statistics for the APSI there were individual items that (Table 4.2), while not statistically significant, did show that fathers (M =31.18, SD = 14.476) who cared for children with ASD reported having more stress as compared with mothers (M = 30.44, SD = 14.195). In fact, Pakistani fathers indicated higher levels of stress as compared to mothers on nine of the thirteen scales. The fathers stress was connected to concerns about the acceptance, future of their child and their inability to develop closeness to their child.

Pakistani mothers perceived themselves as experiencing more stress related to their "sleep problems" (M = 2.07, SD = 1.181), "tantrums/meltdowns" (M = 2.52, SD = 1.055), "ability to communicate" (M = 2.86, SD = 1.014) and "child's social development" (M = 2.83, SD = 1.034). In Pakistan, the majority of mothers stay at home and are primarily responsible for raising the children (Wang, 2011); the father is the sole breadwinner for the family and is at work the whole day. In addition to their child raising responsibilities, Pakistani mothers have additional household responsibilities that creates difficulties for them in handling a child with ASD. Lack of information and misconceptions related to ASDs etiology, scares other family members who in turn are hesitant to help with the child thus hindering child's social development (Imran et al., 2011) and isolating the parents even more. Mothers feel inept due to lack of professional help and family support resulting in stress related to their child's lack of socialization and verbal skills as compared to other typically developing children. Furthermore, children with ASD have unique behaviors such as sleeping disorders that exerts severe physical

and emotional distress on mothers as they have to continue to manage their daily home and family responsibilities affecting their physical and psychological health more than the fathers (Rauf, Anis & Aftab, 2017).

Pakistani fathers scored higher than Pakistani mothers on stress level and perceived more stress related to their child's "concern for the future of the child living independently" (M = 3.38, SD = 1.221), "concern for acceptance of their child" (M = 3.16, SD = 1.331), "potty training" (M = 2.71, SD = 1.396), "transitions" (M = 2.28, SD = .992), "aggressive behavior" (M = 2.21, SD = 1.032), "diet" (M = 2.11, SD = 1.184), "closeness to their child" (M = 1.75, SD = 1.015), "bowel problems" (M = 1.75, SD = 1.997), and "self-injurious behavior" (M = 1.67, SD = 1.076). Fathers seem to be more pessimistic about their children's' futures. This may be because fathers are less involved in child rearing practices and do not interact as much with the child. Fathers have little time to interact and bond with their child. When they attempt to spend what little time they have with their child with ASD, the child's aggressive and self-injurious behavior transforms into frustration and stress. The added stress of work in addition to the child's aggressive or self-injurious behavior limits fathers' interaction with the child and negatively impact their ability to develop a closeness with their child. The Pakistani culture places value on fathers who provide for their families, so prioritizing work over parenting is expected for fathers. A qualitative study by Ali et al. (2011) revealed unequal gender roles and enforced by cultural structures imbedded in Pakistani society. No matter what the economic or social status of men, they exert whatever power they have over what they perceive to be in their control and that is their wives and families (Kishwar, 2017). As a patriarchal society, the father makes the decisions for the family. The

inability to provide therapy and education for the child because of the unavailability of proper services related to screening, diagnosis, early intervention, educational facilitation etc. is one of the major source of stress especially for fathers of children with ASD. Fathers worry about the acceptance of their child in the society and are concerned for the future of their child more than mothers.

This study's results support the findings of Riverard, Terroux, Parent-Boursier & Mercier (2004) who found that fathers were more negatively impacted by a child with ASD mothers. Likewise, it was identified in the past literature that fathers report difficulty in communicating with their children with ASD and certain behaviors of child causes more stress in fathers (Davis & Carter, 2008).

Findings Applied to RQ2

Is there difference in religiosity scores between mothers and fathers who are raising a child with Autism Spectrum Disorder?

Based on the results of Independent t-test of RCOPE Scale from the parents who participated in this research, even though there was no statistically significant difference in religiosity levels between mothers and fathers on 18 of the 21 items, however the results do provide insight into patterns that have emerged from this group of parents.

It is clear that the religiosity and relationship with God was a major coping resource for parents of children with Autism Spectrum Disorder. Findings demonstrate the different positive and negative ways of religious coping, perceiving stress and religious beliefs that influenced parents dealing with stress when raising a child with ASD. Both Pakistani mothers and fathers are closely embedded in their religious beliefs

to cope with stress. Mothers felt more guilt and wondered if God was punishing her and in despair left things for God to solve. The group mean statistics for the RCOPE scale, for these 21 items (Table 4.3), as mothers and fathers as they interpreted their child's developmental disability in context to their religiosity, reveals that overall mothers (M =51.54, SD = 19.312) scored higher on religiosity than fathers (M = 48.93, SD = 19.283). In Pakistani culture, girls are restricted to socialize outside the home as compared to boys. Girls spend more time with mothers imbedded in their religious beliefs, finding solace in prayer and worship. The parents especially mothers religiosity influence girls' religious beliefs growing up to be mothers themselves (Khan, Malik, Musharraf & Lewis, 2019). This coincides with findings by Rauf, Anis and Aftab (2017) that spiritual coping was more effective for mothers than fathers. The fathers scored higher than mothers on religiosity scores and perceived religion as a coping variable related to: "Asked for Forgiveness for my sins" (M = 3.35, SD = .929), "Offered spiritual support to family or friends" (M = 2.39, SD = 1.025), "Looked for love-concern from the members of my mosque" (M = 2.01, SD = 1.076), "Decided the devil made this happen" (M = 1.35, SD = .752). These results demonstrated how fathers feel more guilt and blame the devil for their child's disability. Previous research by Alganthani (2012) in Saudi Arabia, with a 93% Muslim population, reported that a majority of parents believe that their child's special needs were caused by an evil eye or black magic. Pakistani mothers scored higher than Pakistani fathers on religiosity scores and perceived religion as a positive coping variable related to the positive RCOPE scale items: "Did what I could and put the rest in God's hands" (M = 3.48, SD = .767), "Looked for a stronger connection with God" (M = 3.45, SD = .832), "Tried to put my plans into action together with God" (M = 3.40, SD =

.830), “Tried to see how God might strengthen me in this situation” (M = 3.33, SD = .888), “Sought help from God in letting go of my anger” (M = 3.25, SD = .858), “Focused on religion to stop worrying about my problems” (M = 3.05, SD = .930), “Stuck to the teachings and practices of my religion” (M = 2.64, SD = 1.073). In Islamic, Christian, Jewish and Buddhist belief, people with disabilities play a very important role within the communities. Disability is not simply a punishment for mistakes but has the purpose to show others – healthier and wealthier people – respect, humility and charity. As stay at home mothers, having little or no support from the family and community, the Pakistani mothers more so than fathers firmly established the belief that they had been selected by God to take care of this special child. They are more firm in their religious beliefs and practices, putting the matters regarding their child’s disability and its cure in God’s hands.

Similarly mothers scored higher than fathers on negative religiosity scores and perceived religion as a negative coping variable related to the negative RCOPE scale items: “Pleaded with God to make things turn out okay” (M = 3.24, SD = .947), “Didn't do much, expected God to solve my problems for me” (M = 2.21, SD = 1.166), “Questioned God’s love for me” (M = 1.81, SD = 1.089), “Wondered what I did for God to punish me” (M = 1.73, SD = .952), “Felt punished by God for my lack of devotion” (M = 1.70, SD = .904), “Wondered whether God had abandoned me” (M = 1.60, SD = .936), “Questioned the power of God” (M = 1.42, SD = .944), “Wondered whether my mosque had abandoned me” (M = 1.40, SD = .775), and “Tried to make sense of situation without relying on God” (M = 1.40, SD = .834). When Pakistani mothers put all their faith and matters in the hands of God and do not see any results, they start questioning their

devotion, feel punished, plead with God and even question the power of God. This may be the result of the lack of support from their spouses, family, religious community, lack of early intervention and educational facilities.

While there were differences in how Pakistani mothers and fathers viewed God's involvement in the existence of their child with ASD both were devoted to their religion as shown by item 2, "Sought God's love and care" with fathers (M = 3.45, SD = .847) and mothers (M = 3.45, SD = .759). This parity demonstrates that both the parents still seek God's love and care, beyond their varying guilt, anger and frustration in their struggle raising a child with ASD. The specific way in which mothers and fathers of children with ASD in this study interpreted their child's disability and practiced their religiosity may have influenced how they responded to the teachings of their faith and expectation about God.

Findings Applied to RQ3

Is there a difference in marital satisfaction between mothers and fathers who are raising a child with Autism Spectrum Disorder?

Chauhan (2014) wrote that Pakistan is a patriarchal society, where gender roles are constructed of a combination of traditional roots and social values, most women are confined to their homes to do housework for the extended family, where men are the primary figures and women are subordinates. Religiosity and stress influences mothers and fathers as they interpreted their relationship with their spouse. The results from Kansa Marital Satisfaction Scale provides insight into the perception of parents about their relationship with their spouses when raising a child with ASD. It is evident that

religiosity and stress affected marital satisfaction and relationship with their spouses. In the study even though there was no significance difference in marital satisfaction levels between mothers and fathers on item one of KMSS, however fathers (M = 5.45, SD = 1.588) displayed more marital satisfaction with their marriage than mothers (M = 5.03, SD = 1.806). Their satisfaction may be attributed to mothers sacrificing their feelings and emotions to be a good wife, compromising with her opinions (Tazeen et al., 2011) and fulfilling her duty as a housewife as expected by the Pakistani society, culture and Muslim religion.

The overall group mean statistics for the KMSS results show overall fathers (M = 16.56, SD = 4.623) are more satisfied than mothers (M = 14.91, SD = 4.112) which concurs with findings by Chauhan (2011) that fathers are the primary figure in this society who make the decisions for the family and their satisfaction precedes that of the mother. Pakistani fathers reported more marital satisfaction than mothers (M = 5.59, SD = 1.534) than mothers ((M = 4.90, SD = 1.827). When focusing on the relationship with their spouse, fathers (M = 5.52, SD = 1.501) indicated more satisfaction with their spouse than mothers (M = 4.98, SD = 1.879). Conversely, Pakistani mothers displayed less satisfaction with their relationship and with their spouse, which may again be attributed to the expectations of a patriarchal society that women hide her emotions, compromise her opinions and sacrifice her own dreams. Mothers' responses may be the result of her stress, powerlessness, frustration, depression and anxiety contributing to less satisfaction with their marriage and their spouse.

Findings Applied to RQ4

Does religiosity and stress predict marital relationship of parents raising a child with Autism Spectrum Disorder?

The multiple regression results indicated no significant gender difference in either APSI, RCOPE or KMSS scales. Agha (2016) wrote that consanguineous or close kin marriages are the preferred choice of the people living in many parts of Asia. Close kin endogamy is favored in many Muslim countries including Pakistan. Women under this system of patrilineal kinship are viewed as second-class citizens and are considered the property of men. Their identity is constituted in terms of their relationship to men making them dependent on them for their security. Their dependency is further reinforced by patriarchal values propagated by society, culture, and religion. The woman as a wife adjusts and sacrifices her individuality and opinions to adhere and comply with the expectation of her husband. This may factor in to the lack of statistically significant gender differences in any of the scales. However it also may be that the parents who participated in this study seek spiritual and religious support (Rauf, Anis, & Aftab, 2017) and rely on it for any adversaries that come into their lives. Hence, we can know that religiosity helps parents manage stress and supports a positive marital relationship when raising a child with Autism Spectrum Disorder.

This study provides some insight into patterns that have emerged from this group of parents. It is clear that the religiosity and marital satisfaction was a major coping source of strength for Pakistani parents of children with ASD. Religiosity influenced mothers and fathers as they responded to their child's developmental disability. While there was not a statistically significant difference in stress levels of Pakistani mothers and fathers, overall fathers who cared for children with ASD were more stressed as compared

to the mothers. Mothers perceived more stress related to family problems and were more pessimistic their child's social development, communication, behavioral problems and meltdowns, whereas fathers associated their stress to lack of available services and the future of their child.

Religion clearly influenced mothers and fathers as they struggled coping with their child's developmental disability. Overall fathers expressed more belief in religiosity than mothers and more marital satisfaction. Pakistani fathers were affected by stress more than mothers, but they believed more in religiosity, in God's grace.

Limitations

The first limitation to be addressed is the demographics was the sampling process. The sample for this study attempted to represent all the population of Pakistan by collecting data from five Autism Spectrum Disorder centers in five different major cities of Pakistan. However, the parents from these centers may not wholly represent all Pakistani parents who have a child with ASD. Thus, demographic data may not reflect any differences ethnicity, race, annual income, educational level and living status, for those parents who have a child with ASD but are not attending these centers. In addition, the research study did not include in-depth religious, demographic, or socioeconomic status questions. These questions would have allowed more thorough examination of any patterns between the participants' religious background and their response to the rating scales.

The format and development of the data collection tools may have impacted the results in several ways. Participants had to rate their responses on a 4-7 point Likert scale,

with different scales for each data collection tool. The difference between each point on the Likert scale may have been interpreted differently or unclear for the participants. The three scales APSI, Brief RCOPE and KMSS were developed and validated in USA, Canada, and other first world countries (Davis & Kiang, 2018). Some of the questions may not be sensitive to the culture and the religion in Pakistan.

And some of the survey questions addressed sensitive topics. Though each parent was independent of the other when taking the survey, being in the same household may have limited their responses or caused them to adjust their personal response to marriage and religiosity items to be supportive of their spouse. Initially, it was planned to have a paper-pencil survey response from parents at each designated center. Due to COVID-19, we had to use an online survey Qualtrics. In Pakistan, people, particularly women, are not very familiar or comfortable with online surveys (Imran et al., 2011). They may have found the computer process and directions to be difficult and time-consuming. This research explored if stress and religiosity affected marital relationships of Pakistani parents who had a child with ASD but did not take into account individual variables creating stress that may be affecting their religiosity and marital relationship. This is both a limitation, as well as an opportunity for future research.

Recommendations for Future Research.

The researcher proposes follow-up topics for possible future research. The first suggestion is to develop a support group in the parents' religious community, as religion plays a dominant role in the lives of people in Pakistan (Aman et al., 2019). Using religious community, research may look into developing support forums so parents and

caregivers may be connected together for educating and providing emotional and social support using their religious beliefs. Some mothers and fathers did not have a positive view of their religious community support in the present survey. Using the framework of importance of the measurement of religiosity as a multidimensional dynamic variable (Mahoney et al., 1999) the future research should investigate the influence of religious dimensions on any aspect of a person's secular life. Future research should include investigations that address different aspects of a man or woman's religious background.

Mothers and fathers may be stressed, not only by their religious beliefs or the disability of the child, but also by other extraneous aspects of raising a child with ASD. Future research studies must examine factors causing such a variance between Pakistani mothers' and fathers' stress scores. What other issues are stressing them? Further examining the marital dyad and how mothers and fathers divide childcare responsibilities may reveal the reasons why parental gender can be a partial moderator (Victory, 2014). A multi-method follow up study with the participants of this study that included gathering additional demographic information and parent interviews could help interpret more accurately participants survey answers for religiosity, stress and marital relationship.

Implications for Practice

Like any other country, the incidence rate of ASD is growing in Pakistan (Rahbar, Ibrahim & Assassi, 2011). Parents in Pakistan struggle to find qualified professionals who can rightly diagnose their child and suggest appropriate interventions. The literature reviews reveal this is the only study that conducts a survey with three variables, stress, religiosity and marital relationship for mothers and fathers who are raising a child with

ASD from five major cities of Pakistan. The findings from this study can help expand our understanding of the stress, religiosity and marital relationship of the study participants. It will be instrumental in future research to identify reasons for lack of participation by fathers, the lack of community and religious entity, absence of early diagnosis and educational intervention programs for children with ASD.

These studies can provide baseline data to guide policies and planning of diagnosing, interventions and support to families at the government level. Ultimately, the findings from this study and other future research can help to develop community and educational intervention programs for parents, medical professionals, therapists and teachers.

Conclusion

This research sought to discover the influence of religiosity on coping stress and marital relationship of parents raising a child with Autism Spectrum Disorder in Pakistan. Despite the limitations of the study, it provides some insight into patterns that have emerged from this group of parents. It is clear that the religiosity and marital satisfaction was a major coping resource for handling stress as parents of children with Autism Spectrum Disorder. Overall fathers who cared for children with ASD were more stressed as compared to the mothers. With respect to the religiosity, overall fathers expressed more belief in religiosity than mothers did. With respect to the marital satisfaction levels between mothers and fathers, overall fathers displayed more marital satisfaction with their marriage than mothers did. Stress affected fathers more than mothers, yet fathers believed more in religiosity and were more satisfied in their marital relationship than

mothers. This area of concern of mother has potential to research of other predictors that may be affecting the mother's behavior.

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APPENDICES

APPENDIX A

Autism Parenting Stress Index

	Stress Ratings				
Please rate the following aspects of your child's health according to how much stress it causes you and/or your family by placing an X in the box that best describes your situation.	Not stressful	Sometimes creates stress	Often creates stress	Very stressful on a daily basis	So stressful sometimes we can't cope
Your child's social development	0	1	2	3	4
Your child's ability to communicate	0	1	2	3	4
Tantrums/meltdowns	0	1	2	3	4
Aggressive behavior (siblings, peers)	0	1	2	3	4
Self-injurious behavior	0	1	2	3	4
Difficulty making transitions from one activity to another	0	1	2	3	4
Sleep problems	0	1	2	3	4
Your child's diet	0	1	2	3	4
Bowel problems (diarrhea, constipation)	0	1	2	3	4
Potty training	0	1	2	3	4

Not feeling close to your child	0	1	2	3	4
Concern for the future of your child being accepted by others	0	1	2	3	4
Concern for the future of your child living independently	0	1	2	3	4
Subtotal					
Total					

APPENDIX B

The Brief RCOPE: Positive and Negative Coping Subscale Items

Positive Religious Coping Subscale Items (RCOPE)					
		Not at all	Some-what	Quite a bit	A great deal
1	Looked for a stronger connection with God.	0	1	2	3
2	Sought God's love and care.	0	1	2	3
3	Sought help from God in letting go of my anger.	0	1	2	3
4	Tried to put my plans into action together with God.	0	1	2	3
5	Tried to see how God might be trying to strengthen me in this situation.	0	1	2	3
6	Asked forgiveness for my sins.	0	1	2	3
7	Focused on religion to stop worrying about my problems.	0	1	2	3
8	Looked for love and concern from the members of my church	0	1	2	3
9	Offered spiritual support to family or friends.	0	1	2	3
10	Stuck to the teachings and practices of my religion.	0	1	2	3
11	Did what I could and put the rest in God's hands.	0	1	2	3
Negative Religious Coping Subscale Items (RCOPE)					
		Not at all	Some-what	Quite a bit	A great deal
12	Wondered whether God had abandoned me.	0	1	2	3
13	Felt punished by God for my lack of devotion.	0	1	2	3

14	Wondered what I did for God to punish me.	0	1	2	3
15	Questioned God’s love for me.	0	1	2	3
16	Wondered whether my church had abandoned me.	0	1	2	3
17	Decided the devil made this happen.	0	1	2	3
18	Questioned the power of God.	0	1	2	3
19	Didn't do much, just expected God to solve my problems for me.	0	1	2	3
20	Pleaded with God to make things turn out okay.	0	1	2	3
21	Tried to make sense of the situation without relying on God.	0	1	2	3

Pargment et al, 2002

APPENDIX C
Kansas Marital Satisfaction Scale

Item	Extremely Dissatisfied	Very Dissatisfied	Somewhat Dissatisfied	Mixed	Somewhat Satisfied	Very Satisfied	Extremely Satisfied
How satisfied are you with your marriage?	1	2	3	4	5	6	7
How satisfied are you with your husband/wife as a spouse?	1	2	3	4	5	6	7
How satisfied are you with your relationship with your husband/wife	1	2	3	4	5	6	7

Note: Permission is not required for use of the Kansas Marital Satisfaction Scale for education, program evaluation, or scientific purposes. However, the senior author would appreciate being informed of the use of the scale.

APPENDIX D

Parent Questionnaire

DIRECTIONS: Please provide us with the following information. Unless otherwise specified, respond to the questions based on your child who is participating in this evaluation. Thank you.

Today's Date _____

Person completing form (relationship to child). Father _____ Mother _____

Child's Name (Optional)

_____

Child's Date of Birth

_____

Child's Gender_____

Please answer all questions to the best of your ability.

1) What is your date of birth? _____

2) What is your gender?

_____Male

_____Female

3) What is your occupation?

_____

4) What is the best estimate of your yearly total household income (the combined income of everyone living in your house – including any assets such as paychecks, dividends, and any other money income received by you and

any other family member) within the past year?

_____Less than Rupees. 50,000

_____ Rupees. 50,000 – 69,999

_____ Rupees. 70,000 – 99,999

_____More than $100,000

5) Do you receive any financial support from extended family members? (parents, grandparents, sisters, brothers) _____ yes _____no

6) What is the highest grade in school that you have completed?

_____High school diploma

_____Associate degree

_____Vocational degree

_____Bachelor of Arts or Science

_____Master's degree

_____Ph.D., J.D., or M.D

7) How long have you been married? (months & years)

_____

8) How many other children do you have.

9) Do you have another child with Autism Spectrum Disorder.

10) Beside you, your child, and your spouse, what are the names of all persons living or staying in your household?

Name	Date of Birth	Gender	Relationship to Child	Any Medical Diagnosis

APPENDIX E
Adult Consent Form

Study Title: The influence of Religiosity on Coping Stress and Marital Relationship of Parents Raising a Child with Autism Spectrum Disorder in Pakistan

Researcher: Mansur Choudry - Cell +1- 405-361-7915, email: choudry@okstate.edu

Introductory Statement:

The study is being conducted as a dissertation requirement for Mansur Choudry a Ph.D. Candidate in Special Education at Oklahoma State University, Stillwater, Oklahoma USA.

The purpose of this study is to understand how religion helps as a coping mechanism for parents of children with Autism Spectrum Disorder. This survey is comprised of four Forms. It will take you approximately 20-30 minutes to complete the survey.

There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life. Participation is voluntary and there will be no penalty or loss of benefits. You may not directly benefit from this research; however, we hope that your participation and responses may help us learn more about the effect of religion on marital relationships of parents of children with ASD to develop interventions relevant to the Pakistani Culture.

There are no identifiers to the research questions and all survey answers will be anonymous and strictly confidential. You are free to refuse to participate in this research project or to withdraw your consent and discontinue participation in the project at any time without penalty or loss of benefits to which you are otherwise entitled.

If you have any questions concerning your rights as a participant you can contact the OSU IRB at irb@okstate.edu", or Mansur Choudry at Oklahoma State University, Oklahoma, USA. Mansur Choudhry's mobile number is +1-405-361-7915, and email: choudry@okstate.edu

My signature below indicates that all my questions have been answered. I agree to participate in the project as described above.

_____ _____

Signature of Subject Date Signed

A copy of this form has been given to me. _____ Subject's Initials

_____ _____

Signature of Responsible Investigator Date Signed

APPENDIX F
IRB Approval

Oklahoma State University Institutional Review Board

Date:	06/01/2020
Application Number:	IRB-20-259
Proposal Title:	THE INFLUENCE OF RELIGIOSITY ON COPING STRESS AND MARITAL RELATIONSHIP OF PARENTS RAISING A CHILD WITH AUTISM SPECTRUM DISORDER IN PAKISTAN
Principal Investigator:	Mansur Choudry
Co-Investigator(s):	
Faculty Adviser:	
Chris Ormsbee Project Coordinator:	
Research Assistant(s):	
Processed as:	Exempt
Exempt Category:	

Status Recommended by Reviewer(s): Approved

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in 45CFR46.

This study meets criteria in the Revised Common Rule, as well as, one or more of the circumstances for which continuing review is not required. As Principal Investigator of this research, you will be required to submit a status report to the IRB triennially.

The final versions of any recruitment, consent and assent documents bearing the IRB approval stamp are available for download from IRB Manager. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be approved by the IRB. Protocol modifications requiring approval may include changes to the title, PI, adviser, other research personnel, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period.This continuation must receive IRB review and approval before the research can continue.
3. Report any unanticipated and/or adverse events to the IRB Office promptly.
4. Notify the IRB office when your research project is complete or when you are no longer affiliated with Oklahoma State University.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact the IRB Office at 405-744- 3377 or irb@okstate.edu.

Sincerely,

Oklahoma State University IRB

APPENDIX G

Tables

Group Statistics for APSI Scale.

Descriptive statistics for parents for mothers and fathers who took Autism Parenting Stress Index (APSI) scale.

	Gender	N	Mean	Std. Deviation	SE Mean
Your Child's Social Development	Male	110	2.78	.971	.093
	Female	184	2.83	1.034	.076
Your child's ability to Communicate	Male	110	2.83	1.164	.111
	Female	184	2.86	1.014	.075
Tantrums/ Meltdowns	Male	107	2.50	.975	.094
	Female	182	2.52	1.055	078
Aggressive behavior (Siblings, peers)	Male	110	2.21	1.032	.098
	Female	183	2.11	.994	.073
Self-injurious Behavior	Male	110	1.67	1.076	.103
	Female	182	1.57	.837	.062
Difficulty in transitions one activity to another	Male	109	2.28	.992	.095
	Female	183	2.15	1.010	.075
Sleep problems Problems	Male	110	2.05	1.132	.108
	Female	181	2.07	1.181	.088
Your child's Diet	Male	110	2.11	1.184	.113
	Female	183	2.09	1.203	.089
Bowel problems (diarrhea, constipation)	Male	110	1.75	.997	.095
	Female	183	1.64	1.001	.074

Potty training	Male	109	2.71	1.396	.134
Training	Female	183	2.42	1.372	.101
Not feeling close	Male	108	1.75	1.015	.098
to your child	Female	182	1.74	.960	.071
Concern for the future	Male	110	3.16	1.331	.127
child being accepted	Female	183	3.15	1.292	.095
Concern for the future	Male	110	3.38	1.211	.116
child living independently	Female	181	3.29	1.242	.092

Group Statistics for Brief RCOPE Scale.

Descriptive statistics for parents for mothers and fathers who took Brief Religious Coping Scale (Brief RCOPE).

	Gender	N	Mean	Std. Deviation	SE Mean
Looked for stronger Connection with God	Male	80	3.35	.929	.104
	Female	168	3.45	.832	.064
Sought God's Love and care	Male	78	3.45	.847	.096
	Female	166	3.45	.759	.059
Sought God's help to Let go anger	Male	78	3.14	1.041	.118
	Female	168	3.25	.858	.067
Tried putting plans into Action with God	Male	80	3.25	.907	.101
	Female	166	3.40	.830	.064
Tried to see how God Strengthen me	Male	80	3.14	.978	.109
	Female	167	3.33	.888	.069
Asked forgiveness for My sins	Male	80	3.35	.929	.104
	Female	167	3.33	.984	.076
Focused on religion to Stop Worrying	Male	80	3.01	1.013	.113
	Female	167	3.05	.930	.072
Looked for love-concern From members of Mosque	Male	79	2.01	1.138	.128
	Female	162	2.00	1.098	.086
Offered spiritual support to Family and friends	Male	80	2.39	1.025	.115
	Female	167	2.38	1.051	.081
Stuck to teachings-practices Of my Religion	Male	80	2.49	1.043	.117
	Female	166	2.64	1.073	.083
Did what I could- put rest In God's hands	Male	79	3.29	.894	.101
	Female	167	3.48	.767	.059
Wondered whether God Abandoned me	Male	79	1.48	.875	.098
	Female	162	1.60	.936	.074
Felt punished by God for Lack of devotion	Male	78	1.65	.832	.094
	Female	166	1.70	.904	.070

Wondered what I did for	Male	79	1.49	.732	.082
God to punish me	Female	165	1.73	.952	.074
Questioned God's	Male	79	1.68	1.069	.120
Love for me	Female	164	1.81	1.089	.085
Wondered whether Mosque	Male	79	1.23	.639	.072
Abandoned me	Female	162	1.40	.775	.061
Decided the devil	Male	79	1.35	.752	.085
Made this happen	Female	164	1.27	.695	.054
Questioned the	Male	79	1.28	.831	.094
Power of God	Female	165	1.42	.944	.073
Didn't do much-expected	Male	77	1.82	.996	.114
God to solve problem	Female	162	2.21	1.166	.092
Pleaded with God to	Male	77	2.77	1.123	.128
Make things okay	Female	164	3.24	.947	.074
Tried to make sense of	Male	78	1.31	.690	.078
Situation without God	Female	164	1.40	.834	.065

Group statistics for KMMS Scale.

Descriptive statistics for parents for mothers and who took Kansa Marital Satisfaction Scale (KMSS).

	Gender	N	Mean	Std. Deviation	SE Mean
How satisfied are you With your marriage	Male	75	5.45	1.588	.183
	Female	168	5.03	1.806	.139
How satisfied are you with your husband/wife As a spouse	Male	75	5.59	1.534	.177
	Female	168	4.90	1.827	.141
How satisfied are you with your relationship with your husband/wife	Male	75	5.52	1.501	.173
	Female	168	4.98	1.879	.145

T-test for APSI.

Independent samples t-test for mothers and fathers who took Autism Parenting Stress Index (APSI)

Independent Samples T-Test

EVA Equal Variances Assumed) – EVNA (Equal Variances NOT Assumed)

		F	Sig.	t	df	Sig (2 tailed)	Mean diff	Error diff	95% CI lower	upper
APSI-01	EVA	.331	.578	-.408	292	.684	-.050	.122	-.290	.190
	EVNA			-.414	240.991	.679	-.050	.120	-.286	.187
APSI-02	EVA	3.053	.082	-.243	292	.808	-.031	.129	-.286	.223
	EVNA			-.235	205.236	.815	-.017	.134	-.295	.232
APSI-03	EVA	.743	.389	-.138	287	.890	-.017	.125	-.263	.229
	EVNA			-.141	236.519	.888	-.017	.122	-.259	.224
APSI-04	EVA	.271	.603	.820	291	.413	.100	.122	-.140	.339
	EVNA			.812	222.857	.417	.100	.123	-.142	.342
APSI-05	EVA	5.379	.021	.947	290	.344	.107	.113	-.115	.329
	EVNA			.891	188.085	.374	.107	.120	-.130	.343
APSI-06	EVA	.141	.708	1.082	290	.280	.131	.121	-.108	.370
	EVNA			1.088	230.524	.278	.131	.121	-.107	.369
APSI-07	EVA	.260	.610	-.084	289	.933	-.012	.141	-.288	.265
	EVNA			-.084	237.925	.933	-.012	.139	-.286	.262
APSI-08	EVA	.175	.676	.112	291	.911	.016	.144	-.268	.300
	EVNA			.113	232.683	.910	.016	.144	-.267	.299
APSI-09	EVA	.135	.713	.956	291	.340	.115	.121	-.122	.352
	EVNA			.956	230.336	.340	.115	.120	-.122	.353
APSI-10	EVA	.269	.604	1.709	290	.088	.286	.167	-.043	.615
	EVNA			1.702.	223.962	.090	.286	.168	-.045	.616
APSI-11	EVA	.011	.918	.069	288	.945	.008	.119	-.226	.243
	EVNA			.068	214.960	.946	.008	.121	-.230	.246
APSI-12	EVA	.488	.485	.067	291	.946	.011	.158	-.300	.321
	EVNA			.067	224.332	.947	.011	.159	-.302	.324

APSI-13	EVA	.735	.392	.598	289	.550	.089	.149	-.204	.382
	EVNA			.602	234.674	.548	.089	.148	-.202	.380

T-test for Brief RCOPE.

Independent samples t-test for mothers and fathers who took Brief Religious Coping Scale (Brief RCOPE)

Independent Samples T-Test

EVA Equal Variances Assumed) – EVNA (Equal Variances NOT Assumed)

		F	Sig.	t	df	Sig (2 tailed)	Mean diff	Error diff	95% CI lower	upper
RCOP-01	EVA	1.482	.225	-.872	246	.384	-.102	.117	-.334	.129
	EVNA			-.838	141.124	.403	-.102	.122	-.344	.139
RCOP-02	EVA	.705	.402	-.029	242	.977	-.003	.108	-.216	.210
	EVNA			-.027	136.949	.978	-.003	.113	-.226	.220
RCOP-03	EVA	6.149	.014	-.887	242	.376	-.112	.126	-.361	.137
	EVNA			-.827	127.878	.410	-.112	.135	-.380	.156
RCOP-04	EVA	1.203	.274	-1.267	244	.206	-.148	.116	-.377	.082
	EVNA			-1.228	144.412	.221	-.148	.120	-.385	.090
RCOP-05	EVA	1.793	.182	-1.537	145	.126	-.192	.125	-.438	.054
	EVNA			-1.486	143.154	.139	-.192	.129	-.447	.063
RCOP-06	EVA	.785	.376	.157	245	.875	.021	.131	-.238	.280
	EVNA			.160	164.219	.873	.021	.129	-.234	.275
RCOP-07	EVA	1.970	.162	-.272	245	.786	-.035	.130	-.292	.221
	EVNA			-.264	144.545	.792	-.035	.134	-.301	.230
RCOP-08	EVA	.439	.508	.083	239	.934	.013	.152	-.288	.313
	EVNA			.082	149.908	.935	.013	.154	-.292	.318
RCOP-09	EVA	.051	.821	.072	249	.942	.010	.142	-.269	.289
	EVNA			.073	159.336	.942	.010	.141	-.267	.288
RCOP-10	EVA	.117	.732	-1.085	244	.279	-.157	.145	-.442	.128
	EVNA			-1.096	160.171	.275	-.157	.143	-.440	.126
RCOP-11	EVA	4.309	.039	-1.699	244	.091	-.188	.111	-.406	.030
	EVNA			-1.609	134.178	.110	-.188	.117	-.409	.043
RCOP-12	EVA	1.404	.237	-.937	239	.350	-.118	.126	-.365	.130
	EVNA			-.958	164.446	.339	-.118	.123	-.360	.125

RCOP-13	EVA	.874	.351	-1.218	242	.224	-.148	.121	-.386	.091
	EVNA			-1.256	162.815	.211	-.148	.117	-.379	.084
RCOP-14	EVA	11.138	.001	-1.925	242	.055	-.234	.121	-.473	-.005
	EVNA			-2.109	194.888	.036	-.234	.111	-.452	-.015
RCOP-15	EVA	.217	.642	-.860	241	.391	-.127	.148	-.419	.165
	EVNA			-.865	156.710	.388	-.127	.147	-.418	.163
RCOP-16	EVA	8.831	.003	-1.661	239	.098	-.167	.101	-.366	.031
	EVNA			-1.774	184.022	.078	-.167	.094	-.353	.019
RCOP-17	EVA	1.366	.244	.819	241	.414	.080	.098	-.112	.273
	EVNA			.797	143.729	.427	.080	.100	-.119	.279
RCOP-18	EVA	4.261	.040	-1.123	242	.262	-.140	.124	-.385	.105
	EVNA			-1.175	172.775	.242	-.140	.119	-.374	.095
RCOP-19	EVA	8.197	.005	-2.539	237	.012	-.392	.154	-.696	-.088
	EVNA			- 2.685	172.603	.008	-.392	.146	-.680	-.104
RCOP-20	EVA	5.650	.018	-3.436	239	.001	-.478	.139	-.752	-.204
	EVNA			-3.232	128.592	.002	- .478	.148	-.770	-.185
RCOP-21	EVA	3.085	.080	-.871	240	.385	-.095	.109	-.309	.119
	EVNA			-.932	180.247	.353	-.095	.102	-.295	.106

T-test for KMSS.

Independent samples t-test for mothers and fathers who took Kansa Marital Satisfaction Scale (KMSS).

Independent Samples T-Test

EVA Equal Variances Assumed) – EVNA (Equal Variances NOT Assumed)

		F	Sig.	t	df	Sig (2 tailed)	Mean diff	Error diff	95% CI lower	upper
KMSS-01	EVA	3.332	.069	1.751	241	.081	.424	.242	.053	.900
	EVNA			1.839	160.459	.003	.688	.230	-.031	.878
KMSS-02	EVA	6.189	.014	2.843	241	.005	.668	.242	.211	1.164
	EVNA			3.039	167.567	.003	.688	.226	.241	1.135
KMSS-03	EVA	6.989	.009	2.210	241	.028	.544	.246	.059	1.029
	EVNA			2.406	175.702	.017	.544	.226	.098	.990

Multiple Regression for APSI, RCOPE, KMSS and Gender

Descriptive statistics for APSI, RCOPE, KMSS and Gender

	Mean	Std. Deviation	N
KMSS Score	12.74	7.425	294
Gender	1.63	.485	294
APSI Score	30.53	8.362	294
RCOPE Score	42.15	20.057	294

Test of Normality statistics for APSI, RCOPE, KMSS and Gender

Tests of Normality

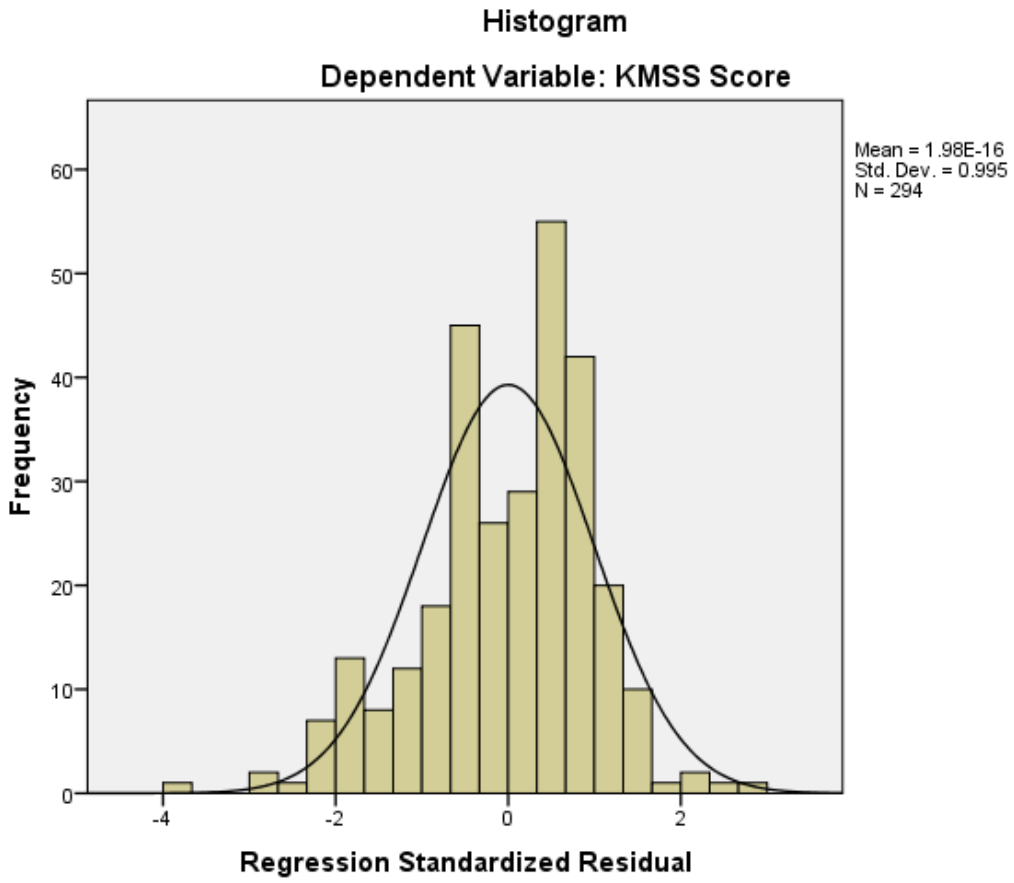
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KMSS Score	.184	294	.000	.844	294	.000

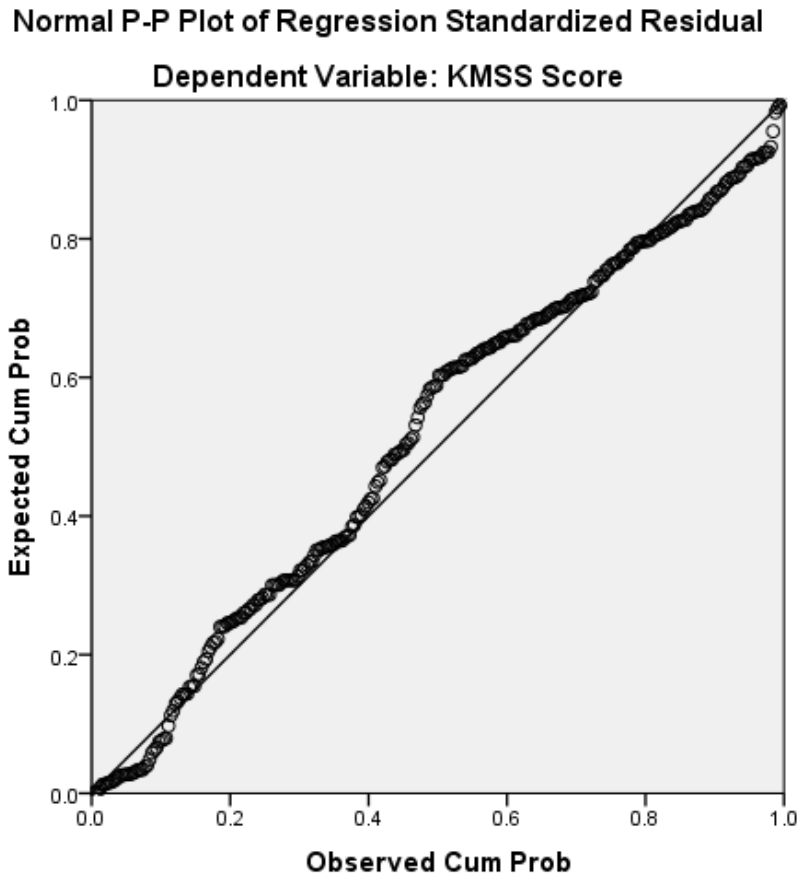
a. Lilliefors Significance Correction

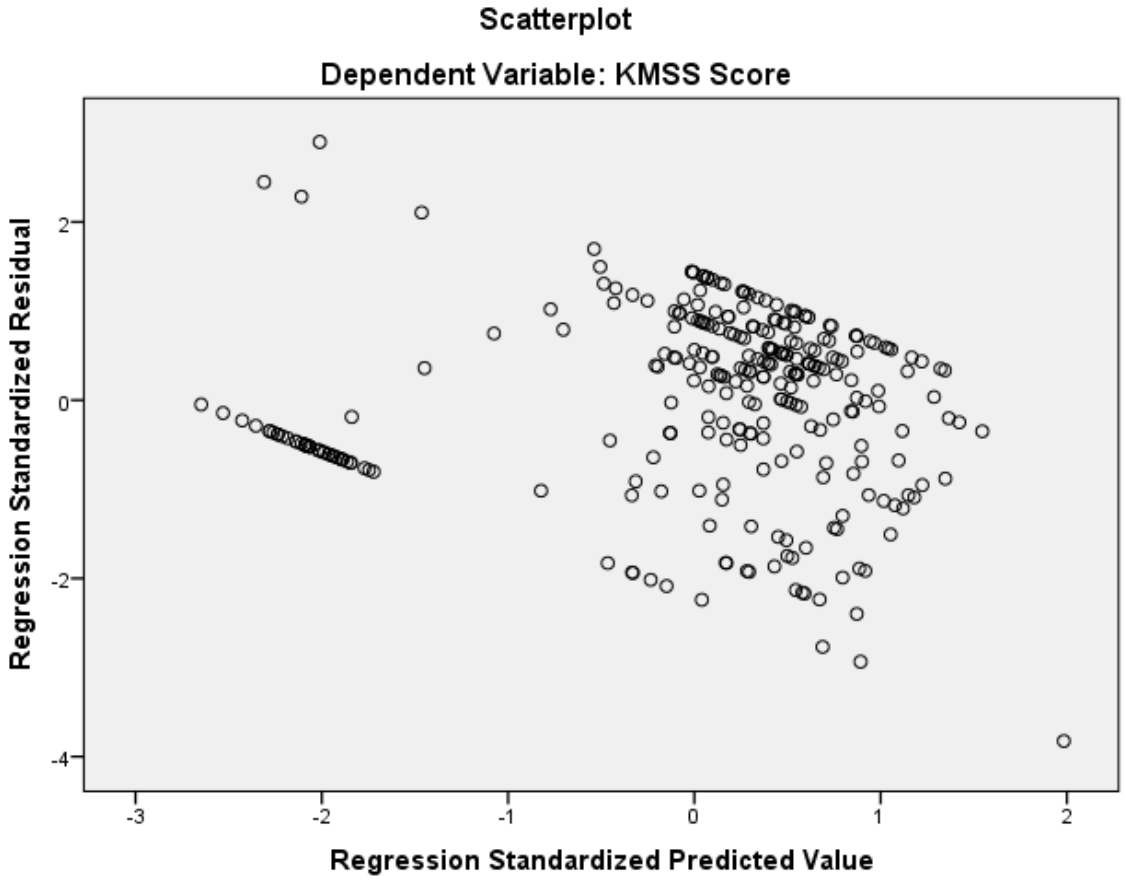
Correlation statistics for APSI, RCOPE, KMSS and Gender

Correlations

		KMSS Score	Gender	APSI Score	RCOPE Score
Pearson Correlation	KMSS Score	1.000	.151	-.085	.620
	Gender	.151	1.000	-.048	.272
	APSI Score	-.085	-.048	1.000	.069
	RCOPE Score	.620	.272	.069	1.000
Sig. (1-tailed)	KMSS Score	.	.005	.074	.000
	Gender	.005	.	.205	.000
	APSI Score	.074	.205	.	.119
	RCOPE Score	.000	.000	.119	.
N	KMSS Score	294	294	294	294
	Gender	294	294	294	294
	APSI Score	294	294	294	294
	RCOPE Score	294	294	294	294


Histogram
Dependent Variable: KMSS Score
Mean = 1.98E-16
Std. Dev. = 0.995
N = 294
Frequency
60
50
40
30
20
10
0
-4
-2
0
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: KMSS Score
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: KMSS Score
Regression Standardized Residual
Regression Standardized Predicted Value
2
0
-2
-4
-3
-2
-1
0
1
2

VITA

Mansur O Choudry

Candidate for the Degree of

Doctor of Philosophy

Dissertation: THE INFLUENCE OF RELIGIOSITY ON COPING SRESS AND MARITAL RELTATINSHIP OF PARENTS RAISING A CHILD WITH AUTISM SPECTRUM DISORDER IN PAKISTAN

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Biographical:

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Completed the requirements for the Doctor of Philosophy in Education at Oklahoma State University, Stillwater, Oklahoma in December, 2020.

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Working with children with multiple disabilities, specifically children with autism spectrum disorder.
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