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# THE ASSOCIATION BETWEEN CHILD BEHAVIOR PROBLEMS AND PARENTING STRESS IN FAMILIES OF CHILDREN WITH DISABILITIES IN THE UNITED ARAB EMIRATES (UAE): FAMILY RESILIENCE PROCESSES AS PROTECTIVE FACTORS

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## **ABSTRACT**

Evidences that suggest a possible high correlation between externalizing behavior problems and parenting stress in families raising a child with a developmental delay urge to explore new protective factors within the context of the family system nested in cultural and social frameworks. Walsh's (2016) family resilience conceptual framework is emerging as a dynamic flexible guide for investigating the resources for families experiencing adversity, and evaluating the extent to which these resources can act as protective factors. The core processes of the family resilience framework are described as flexible resources that can be perceived and expressed differently across various cultures; and thus, examining the processes cross-culturally is essential. Therefore, this study was conducted in families of atypically developing children in Dubai, UAE to examine the effectiveness of family resilience processes framework. Moreover, although many studies have indicated a potential association between parenting stress and child behavior problems, none of the studies have examined the specific behavioral aspects that contribute to parenting stress. This study has further explored the association between child behavior problems and parenting stress through assessing the significance of two behavioral elements: severity and intensity. The finding in this study concluded that both elements yield possible association with parenting stress. The study's findings on the moderation effect of family resilience processes did not show statistical significance, although some key processes in the model were examined separately in similar concepts and showed significant relationships. The current study's findings have implications for policy makers and interventionists serving individuals with disabilities and their families to consider and value the heterogeneity of the target group and their families that are nested within diverse cultures and societies.

THE ASSOCIATION BETWEEN CHILD BEHAVIOR PROBLEMS AND PARENTING  
STRESS IN FAMILIES OF CHILDREN WITH DISABILITIES IN THE UNITED ARAB  
EMIRATES (UAE): FAMILY RESILIENCE PROCESSES AS PROTECTIVE FACTORS

by

Sara A. Alansaari

B.A., United Arab Emirates University, 2018

Thesis

Submitted in partial fulfillment of the requirements for the degree of  
Master of Science in Human Development and Family Science

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## INTRODUCTION

The recent debates in the contemporary developmental neuroscience field and theoretical developmental systems models suggest that children's cognitive, social, and emotional developmental processes interact dynamically with their caregivers' biological, behavioral, and psychological characteristics in continuous interactions (Lerner, Hershberg, Hilliard, & Johnson, 2015). Therefore, aspects of the individual course of development cannot be thoroughly understood without the consideration of the direct influence caused by family members' characteristics and the indirect influence of the cultural and social contexts, as these interconnected processes interact actively according to Bronfenbrenner's (1972) ecological theory, Lerner's developmental contextualism (1989), and Elder's life-course theory (1998). These ongoing parent-child co-actions embedded within a steadily changing social and cultural systems in the macro-level of organization continue to establish the human course of development. For example, the coercion theory developed by Patterson (1980, 1982) described the mechanism through which both parents and children engage in shaping each other's externalizing behaviors. The parent's response to the child's misbehavior will set the stage for either escalating or weakening the behavior, and this will in turn, regulate the parent's subsequent responses. Accordingly, early parent-child dyadic relationship characterized by responsive and synergic interactions can positively affect child outcomes, while negative and discordant interactions will most likely result in adverse consequences.

While some of these reciprocal exchanges between parents and typically developing children have been the focus of many studies (Lindsey, Caldera, & Tankersley, 2009; Harrist, Pettit, Dodge, & Bates, 1994), other studies highlighted the strength of such mechanism in parents of children at high risk of developmental delays and psychopathology that might cause a

permanent disability (Baker et al., 2003; Brammer et al., 2018). According to the World Health Organization (2011), the definition of the term *disability*, as guided by bio-psycho-social model, is perceived as a result from the dysfunctional interactions between the individual's characteristics and the social and physical environment that impedes the person's full engagement with the society as equally as others. Based on the 2004 World Health Survey and Global Burden of Disease data on disability prevalence, about 15% of the world's population based on the 2010 population estimates were estimated to be living with a disability, including children (World Health Organization, 2011). The estimates of the prevalence of disability indicate a high increase globally in recent years due to many factors related to spread of diseases, increased awareness, improved screening, diagnosis methods, and accessibility to service (World Health Organization, 2020). Zablotsky et al. (2019) results indicated an increase in the number of US children diagnosed with developmental disability, attention-deficit/hyperactivity disorder, autism spectrum disorder, and intellectual disability by 1.6%, 1%, 1.4%, and 0.3%, respectively, from 2009 to 2017 according to the data obtained from the National Health Interview Survey. In sub-Saharan Africa, North Africa and the Middle East, the prevalence of children with developmental disabilities has increased by 71.3%, and 7.6%, respectively between the years 1990 and 2016 (Olusanya et al., 2018).

Previous studies have demonstrated that psychopathological consequences experienced by mothers and children's dysregulated behaviors are the most common outcomes that emerge from parent-child interactions in families of children with disabilities (Coulacoglou & Saklofske, 2017). Children with disabilities are characterized by delays in different developmental aspects such as cognitive (Beadle-Brown et al., 2000), language, and social characteristics (Blume et al., 2021). Moreover, individuals with disabilities are more susceptible to developing externalizing

and internalizing behavior problems compared to their typically developing counterparts (Baker et al., 2002; Baker et al., 2003; Emerson & Einfeld, 2010; Floyd & Gallagher, 1997). These characteristics might affect parent's psychological experience. Parenting stress is one example of a variety of parent's psychological experiences that could develop in parents of children with disabilities (Floyd & Gallagher, 1997; Woodman et al., 2015). Prior research substantiates the significant adverse consequences that have been associated with parenting stress. Lower levels of parenting warmth (Haskett, Ahern, Ward, & Allaire, 2006), child psychopathology (Liu et al., 2018), maternal depression (van der Oord et al., 2006), and dysfunctional parent-child relationship (Abidin, 1995) are among the common factors that have revealed a positive relationship with parenting stress. While many characteristics in children with disabilities might play vital roles in predicting stress experienced by parents, behavior problems have been found to be the most salient and consistent factor that significantly contributes to developing stress experienced by parents (Coulacoglou & Saklofske, 2017).

The possible association between externalizing behavior problems and parenting stress suggests the need to explore new protective factors within the context of the family system nested in cultural and social frameworks. The findings from Hauser-Cram and Woodman (2016) on the parent-child developmental mutual effect in children with developmental disabilities suggested the integration of family systems perspective in intervention strategies to buffer the potential sequelae associated with the stress of having a child with a disability. A huge body of research has studied the role of individual resilience and resources in protecting the self from the negative outcomes of inevitable life adversities. Yet, as inspired by relational developmental system theories, the course of the human development as determined by the interdependent interplays between the individual and the environment across multilevel of organizations



(Lerner, Hershberg, Hilliard, & Johnson, 2015) may prompt broadening the lenses to include a more holistic matrix, such as the family as a resilient organization that contribute to promising outcomes for its members in the face of negative events. Walsh's (2016) family resilience conceptual framework is emerging as a dynamic flexible guide for investigating the resources for families experiencing adversity, and evaluating the extent to which these resources can act as protective factors. The family resilience framework assumes the spill of the adversities' impact among all family members, which in turn requires a collective effort to utilize the resources including the shared beliefs, the organizational qualities, and the communication processes. According to Walsh's theoretical philosophy, the core processes of the family resilience framework are described as flexible resources that can be perceived and expressed differently across various cultures and environments; and thus, examining the processes cross-culturally is essential. Examining family resilience processes as potential protective factors of negative events in families living in individualistic vs. collectivistic societies with different belief systems would presumably yield fruitful comparable findings.

In this study, I will examine the family resilience processes as protective factors in the association between child externalizing behavior problems and parenting stress in families of children with disabilities in the emirate of Dubai, United Arab Emirates.

## **LITERATURE REVIEW**

### *Parenting stress and children with disabilities*

The National Institute of Mental Health describes stress as the brain and body's reaction toward a demand (The National Institute of Mental Health, n.d.). A demand can be a significant life event or change that might evoke physiological and behavioral responses (McEwen, 2007). Parenting stress is a form of stress that emerges as a result of parenting demands that exceed the

parent's potential and resources according to their own perception (Coulacoglou & Saklofske, 2017). A theoretical framework of dysfunctional parenting sources has governed the expansion of parenting stress conceptualization developed originally by Abidin (1995). The sources of parenting stress have been proffered as multidimensional that range from objective facts, such as life events, to subjective experiences, such as parent's perceptions of their own role as competent parent. Abidin's (1995) theoretical framework determined three main sources of parenting stress, and they include child domain, parent domain, and situational/demographic domain. While the original framework consisted of the child and the parent domains as critical sources within the parent-child system, the situational/demographic domain was an additive dimension originated from sources outside the system. The child domain concerns parenting stress that arises directly from child characteristics, whereas the parenting domain considers parenting practices and functioning as the direct triggers of parenting stress. The situational/demographic domain include stressful life circumstances experienced by parents outside the parenting system, such as death or loss of a job.

Prior studies have evidenced the elevated levels of stress experienced by parents of children with disabilities compared to families of typically developing children according to parents' reports about their child functioning (Woodman et al., 2015), care demands (Floyd & Gallagher, 1997), and the child's impact on the family (Baker et al., 2002). In the study by Baker et al. (2002), the results of both parents' reports of 225 children with or without developmental delays indicated that parents of delayed children experience higher perceived negative impact caused by their child on the family system and the finances relative to other children. Moreover, lack of emotional and social support is highly perceived by parents of children with disabilities compared to parents of typical children (Weiss, 2002).

“Disability” is either a temporary or a long-term condition that might be characterized with limited physical, sensory, social, cognitive, emotional, and language functioning (World Health Organization, 2011). Delayed functioning might cause a wide range of challenges that could be manifested in the individual’s behavior. Children with disabilities have consistently shown higher rates of problem behaviors as opposed to their counterparts with typical development (Baker et al., 2002; Baker et al., 2003; Emerson & Einfeld, 2010; Floyd & Gallagher, 1997). For example, individuals with intellectual disabilities exhibit behavior problems that are estimated to be 3 to 7 times higher than typically developing individuals (Dekker, van der Ende, & Verhulst, 2002). Short- and long-term implications of such behavioral challenges could include, but not limited to challenges in inclusive school placement (Dickson, 2005), long-term psychopathology (Baker et al., 2010), limited employment opportunities (Dewa & Lin, 2000), and independent living difficulties (Cullen, Simmons-Reed, & Weaver, 2017). Therefore, parenting a child with disability requires intense caregiving demands (Floyd & Gallagher, 1997) due to the associated adverse behavioral and medical symptoms (Baker et al., 2003) that might impede the child’s ability to function independently. Mothers parenting a child with disability report sacrificing the time for themselves or the family for taking care of their child (McConnell et al., 2015), which in turn provoke negative and ambivalent feelings (DeMyer, 1979). The severity of the disability has a positive association with the level of stress experienced by parents. For example, parents of children diagnosed with autism spectrum disorder showed increased stress compared to parents of children with mental retardation (Weiss, 2002). Parents of children with autism also reported lower satisfaction with leisure time, which was associated with low effective communication within the family; and thus, lower satisfaction with family life and poorer family functioning were reported (Walton, 2019).

Although many studies on parenting stress in families of children with disabilities included only mothers' self-report as an indicator of the high stress experienced by parents (e.g. Weiss, 2002; Woodman et al., 2015; Ortiz & Barnes, 2019), the findings of Baker (1994) revealed that both mothers and fathers of children with ADHD experience similar levels of parenting stress. However, mothers reported perceiving their child as more stressful compared to fathers, but no difference was shown between maternal and paternal reports of the stress stemming from parents' characteristics. Another study's by Sloper et al. (1991) also revealed that both maternal and paternal reports of perceived satisfaction with life showed high agreement in families raising a child with disability.

#### *Child behavior problems as the salient factor*

The association between developmental disabilities and both internalizing and externalizing behavior problems has shown high correlation repeatedly (Baker et al., 2002; Baker et al., 2003; Emerson & Einfeld, 2010; Floyd & Gallagher, 1997). Internalizing problems in early life, such as depressive and anxiety symptoms, have been associated later risks of psychiatric symptoms, poor adaptive functioning, and low self-esteem (Aronen & Soininen, 2000) in addition to academic challenges, suicidal behavior, and substance use (Woodward & Fergusson, 2001), while externalizing behavior problems, such as disruptive behaviors, self-injurious behaviors, and defiance can often predict aggression, substance use (Loeber & Hay, 1997; Maggs et al., 2008), and challenges in academic achievement (Metcalf, Harvey, & Laws, 2013). With no effective intervention programs provided, there is a great possibility that high levels of externalizing problems will endure from childhood through early adulthood in children with disabilities as reported by Hauser-Cram and Woodman (2016). Accordingly, persistence of

behavioral problems in later life can be often predicted by the existence of such problems during childhood (Achenbach, Howell, Quay, & Conners, 1991).

While many factors related to child characteristics (Khamis, 2006), parents' characteristics (Baker, 1994), parenting demands (Floyd & Gallagher, 1997), perceived social support (Schoeder & Remer, 2007), and financial strain (Baker et al., 2002) might play vital roles in predicting the level of stress experienced by parents of children with disabilities, externalizing behavioral problems associated with children diagnosed with developmental delays and disabilities have been the most salient predictable factor that showed consistency across various studies (Baker et al., 2002; Baker et al., 2003; Emerson & Einfeld, 2010; Floyd & Gallagher, 1997). Externalizing behavioral problems in children with disabilities emerge as a result of the child's interaction with the increasing cognitive and social demands in the environment (Ogundele, 2018). The behavior problems have a tendency to increase over time with such increasing demands posed by the surrounding circumstances, resulting in greater difference between the behavior problems reported by parents of children with disabilities compared to typical children (Baker et al., 2002). Results demonstrated that both maternal and paternal reports of child behavior problems showed consistency, especially in families of children with atypical development (Baker, 1994; Baker et al., 2002; Sloper et al., 1991). The extent of behavior problems was a more significant predictor of parenting stress compared to the child's delay in functioning (Baker et al., 2002). While both internalizing and externalizing behavior problems in children with delays show persistence and often predict adverse outcomes including parenting stress, longitudinal studies have demonstrated that externalizing behavior challenges have a greater effect on predicting parenting stress throughout longer developmental periods compared to internalizing behavior problems (Woodman et al., 2015).

*The UAE: people with disabilities (or people of determination)*

While there are no official statistics published by the government on the number of individuals with disabilities in the UAE, it could be estimated that the percentage of people with disabilities in the UAE is consistent with the world percentage, which is 8-10% (Bradshaw, Tennant, & Lydiatt, 2004). The UAE federal government and Dubai local administration made remarkable legislative efforts aimed at protecting and ensuring the rights of people with special needs in the country to meet the international standards of inclusion.

In 2006, the UAE president, His Highness Sheikh Khalifa bin Zayed Al Nahyan issued the Federal Law No. (29), the first law concerning the rights of people with special needs in the country. According to the law, a person with special needs is defined as “every person suffering from a temporary or permanent, full or partial deficiency or infirmity in his physical, sensory, mental, communicational, educational or psychological abilities to an extent that limits his possibility of performing the ordinary requirements as people without special needs.” The law aims at protecting the rights of people with special needs by providing all services within their capabilities and ensuring equal care, educational opportunities, health services, training and rehabilitation. The law also advocates for full inclusion of people with special needs in both private and public schools in addition to increased physical accessibility in the built environment (The United Arab Emirates Government Portal, 2021). Financial aid is also provided by the Ministry of Community Development to families of individuals with disabilities in addition to “People of Determination Card”, which includes services and privileges provided by the Ministry in collaboration with multiple parties (Ministry of Community Development, n.d.). Moreover, the UAE signed the United Nations Convention on the Rights of Persons with Disabilities in 2008 and ratified its status in 2010 (The United Arab Emirates Government Portal,

2021). The second law concerning the protection of people with disabilities' rights in the Emirate of Dubai was issued in March 2014 by His Highness Sheikh Mohammed bin Rashid Al Maktoum, the Vice President and Prime Minister of UAE and Ruler of Dubai (Ministry of Community Development, 2014). The Dubai Law No. (2) supports the initial Federal Law No. (29) in ensuring the rights of people with disabilities and protecting them from all types of discrimination, abuse, negligence, and exploitation. The law extends the Federal Law No. (29) by guaranteeing their involvement in other community services, such as public transportation, police and judicial services. A major social change and increased awareness concerning the rights of people with special needs began to emerge in 2017 upon the formation of the National Strategy for Empowering People with Disabilities launched by His Highness Sheikh Mohammed bin Rashid Al Maktoum, the Vice President and Prime Minister of UAE and Ruler of Dubai (The United Arab Emirates Government Portal, 2020). The goal of the policy is to establish an inclusive society for people with disabilities and their families through effective policies and services in six main categories including health and rehabilitation; education; vocational rehabilitation and employment; mobility; social protection and family empowerment; public life, culture and sports. HH Sheikh Mohammed bin Rashid had also ordered to officially change the term "people with disabilities" to "people of determination" in all government and private institutions as part of the new policy.

People with disabilities in the UAE are receiving services in either welfare and rehabilitation centers or mainstream education including public and private schools. In welfare and rehabilitation centers, 62% of the population are served in the private centers, while 38% are placed in either federal or local government centers. Most individuals with disabilities in welfare and rehabilitation centers are males (66%) (Ministry of Community Development, n.d.).

A couple of projects were launched beginning from 2008 with the target of promoting equal opportunities and integration of people with special needs in educational settings. The Department of Special Education in the UAE Ministry of Education was established in 2008 to ensure acceptability to mainstream government schools for people of determination, without exceptions (The United Arab Emirates Government Portal, 2020). In regards to the private school system in the emirate of Dubai, the Knowledge and Human Development Authority (KHDA) has launched the Dubai Inclusive Education Policy Framework, a comprehensive guide for educational stakeholders and school members to effectively address the needs of students requiring special services (Knowledge and Human Development Authority, 2017). Furthermore, initiatives such as the “School of All” 2008 launched by the Ministry of Community Development; “The National Project for Inclusion of People with Special Needs” 2008 established under the slogan “Our Life is in Our Integration”; “My community... a city for every one” initiative; and Dubai Disability Strategy 2020 followed the government legislative efforts to support the administration’s mission of achieving full and active participation of people with special needs in the society thorough out their lives and across different settings (The United Arab Emirates Government Portal, 2019). Today, no school should discriminate a person due to his/her disability and reject their enrollment.

However, it is also important to note that despite the tremendous campaigns and government efforts toward addressing issues related to people with disabilities, many gaps need to be bridged including the lack of psychiatrists, psychologists and other relevant specialists; the poor adherence to ethical standards and professional practices when for diagnosing and treating psychopathologies and disabilities; and the paucity of national scientific research compared to other developed countries (Al-Darmaki & Yaaqeib, 2015).



Little research has been conducted in the United Arab Emirates to investigate parental psychological experiences in families of children with disabilities. The results of Dukmak (2009) have shown that problem-focused coping is positively associated with parenting satisfaction, while emotional-focused coping is negatively associated with adaptation in families of children with intellectual disabilities in the UAE. In another study conducted on families of children with intellectual disabilities in the UAE, the child's age and his/her level of functioning have been found to significantly predict parents' feelings of distress and psychiatric symptomology (Khamis, 2006). The family's cultural, religious, and moral values emphasized by the family were associated with less parental stress.

#### *The UAE: religious and cultural background*

The United Arab Emirates is a federal country that was formed on December 2<sup>nd</sup>, 1971 and it consists of seven emirates. It is considered as one of the Arab countries located in the Middle East, sharing borders with the Gulf of Oman and the Persian Gulf. Over the past four decades, the country has dramatically shifted from a traditional tribal lifestyle to a modernized society influenced by Western cultures. The society experienced a huge and rapid change in economic growth and social development upon the discovery of oil and declaration of the country's independence. While oil and gas have been the main economic resources for the country in the past, the government is aiming to transition from conventional economy to a knowledge-based economy (Embassy of the United Arab Emirates, n.d.). The UAE's population has been increasing over the past years. In 2019, more than 9 million people were living in the UAE (The World Bank, 2019), of which 34% living in Dubai (Dubai Statistics Center, 2019). Expatriates constitute the majority of Dubai's total population, while Emirati citizens make up around 8% of the city's population (Dubai Statistics Center, 2019).

Islam is the official religion in the country (The United Arab Emirates Government Portal, 2020). It is an Abrahamic religion that shares many common characteristics with Judaism and Christianity. Muslims depend on two major resources for guiding their lives in all aspects, and these include the Holy Book “*Qur’an*”, believed to be the word of *Allah* (God); and Sunna, the actions and sayings of prophet Muhammad, Allah’s messenger. There are six main pillars of faith that all Muslims must believe in them, and they include faith in the existence of Allah, the Angels, the Holy Book, the Messengers and Prophets (e.g., Moses, Jesus, Muhammad), the Day of Judgment, and the divine decree or predestination, good or bad.

Despite the shared Islamic principles between Muslims, it is critical to be aware that cultural practices and beliefs are not always consistent with real Islamic perspectives toward various issues and life aspects. Certain considerations must be taken before reaching to a conclusion on Muslims’ attitudes toward an issue based on their actions or beliefs. For example, in regards to perspectives toward disabilities, the individual’s faith, socio-economic status, educational level, awareness, and culture are some common factors that exert an effect on people’s attitudes and concepts toward disabilities (Al-Aoufi, Al-Zyoud, & Shahminan, 2012), despite their shared Islamic beliefs.

While the Islamic view on disability has been characterized by respect, equality, and support, social stigma and culturally embedded beliefs influenced by people’s lack of awareness toward disabilities, especially mental illnesses have been playing a detrimental role in fulfilling the psychological and social needs of individuals with special needs and their families. According to Islamic teachings, individuals with disabilities are viewed as individuals in need who were referred in the Qur’an as “disadvantaged people” who have their own rights and

require a special treatment, and that no individual must be discriminated based on the existence of a disability. For example, a verse in the Qur'an (48, 17) states that:

There is not upon the blind any guilt or upon the lame any guilt or upon the ill any guilt [for remaining behind]. And whoever obeys Allah and His Messenger - He will admit him to gardens beneath which rivers flow; but whoever turns away - He will punish him with a painful punishment.

Moreover, during the era of Islamic caliphate, individuals with disabilities were considered as people in need who had an allotment from what was called the House of Money "*Bayt al-mal*", a financial institution founded by the Prophet Muhammad and extended by the following caliphates Abu-Baker and Omar (Rahman, 2015).

Another Islamic perspective that might also affect the experience of Muslim families raising an individual with special needs involves the concept of affliction. It is believed in Islam that people who are afflicted with adversities are the most adored individuals by Allah. The Prophet Muhammad said:

“We, the company of the prophets, are the people who have the hardest trials, then after us come the believers, then the others like them.”

Hard trials and people's acceptance of them is a test from Allah that reflects the individual's belief in the sixth pillar, the divine decree or predestination, good or bad. It is believed that all the prophets and messengers in Islam have experienced negative adversities and harsh trials. They set as examples of how Muslims should view, perceive, and react toward negative life experiences. Patience, acceptance, faith, and optimism are the attributes that characterized the prophets' experiences, and were repeatedly emphasized in Islamic teachings as qualities of faithful people.

However, due to people's lack of awareness, people with special needs in the UAE, especially people with mental illnesses, experience social stigma and indirect stereotypes. Some people perceive mental illness as a sign of "madness", and depression as a reflection of a lack of faith (Almazroui, 2014). Consequently, people with mental health issues and their families might be reluctant to seek professional help or social support. Moreover, the associated behavioral problems might obstruct the child's enrollment in some inclusive education due to school members and families' safety concerns about their own child (Dickson, 2005). Some people perceive the behavioral problems as a manifestation of the family's environment and a reflection of the parent's incompetence in child rearing. Hence, societal judgments and their acceptance might impose pressure on parents, which in turn provoke negative feelings and experiences (Saloviita, Itälina, & Leinonen, 2003). In spite of that, social change led by increased awareness is taking place in recent years with the prominent initiatives supported by the country's leadership.

While Islamic perspective and cultural attitudes toward people with disabilities might somehow contradict each other in the Emirati society, emphasis on the values of family ties, social support, and social responsibility is strongly rooted in the historical culture and religion. For example, Prophet Muhammad said:

"The believers in their mutual kindness, compassion and sympathy are just like one body. When one of the limbs suffers, the whole body responds to it with wakefulness and fever."

The UAE is a collectivistic society where the individual is expected to show a long-term commitment in communication, support, and mutual responsibility to the close family, and the extended family members. Emirati families are characterized with large sizes and interconnected

tribes whose members socialize regularly and share a sense of interdependence and loyalty. Extended family members including grandparents, grandchildren, and in-laws share one household in many Emirati families. Therefore, an individual's experience either positive or negative reverberates in the entire family system, affecting all of its members.

#### *Family resilience processes as protective factors*

Resilience is defined as the individual's adaptation and restructuring capacity to resist negative life experiences (Coulacoglou, & Saklofske, 2017). It is a quality that was found to be effective in facilitating recovery and achieving positive growth from adversity. The study of individual resilience has been the focus of many theoretical frameworks and research. The findings of research on resilience as an individual trait demonstrated the significance of other effective factors beyond the individual resources. For example, familial relationships, such as grandparents (Werner & Smith, 2001), and extrafamilial relationships, such as teachers and coaches (Walsh, 1996), were found to be active resources for youth to survive the adverse experience of maltreatment or parental dysfunction at home. According to relational developmental system theories, humans possess plasticity, a capacity to be shaped through dynamic co-actional interactions that occurs within and across contextual levels of micro- and macro-organizational systems. Family, social and cultural systems are crucial dimensions that contain the individual and exert bidirectional effects according to Elder's life-course theory. Therefore, resources in these dimensions should be identified considering the inevitable influence of such systems.

The event of having a child with a disability in the family represents a persistent life challenge that would impact the family system. Family resilience perceives the family as a functional matrix (Walsh, 1996) that embraces potential key family processes mobilized by the

family members to promote resilience among all family members. Family members may take active actions, withstand adversity, lessen the associated negative outcomes, promote adaptation, and strengthen resilience to face future challenges as they emerge over the course of development.

Family resilience model considers the cultural and family values aspects that vary widely across families. It encompasses nine dynamic key processes organized in three main categories that include the belief system, organizational processes, and communication/problem-solving processes. Their dynamic nature is represented by the variations in their importance, relevance, and usefulness in reaction to the context of the family and the nature of the event. The key processes include making meaning of adversity, maintaining a positive outlook, transcendence and spirituality, family flexibility, family connectedness, mobilizing economic and social resources, communication with clarity, sharing emotions openly, and collaborative problem solving.

In a study by Uddin et al. (2020), family resilience processes were found to exert a buffering effect on the relationship between adverse childhood experience and children's mental health and ADHD symptoms. In a mixed-method study by Allen (2020), families of children with hearing disabilities use resources such as the social support services and belief in the importance of family flexibility as coping mechanisms.

## **THE CURRENT STUDY: AIM AND HYPOTHESES**

Although many studies results indicated possible association between parenting stress and child behavior problems in families of children with typical and atypical development, none of the studies have dissected the specific behavioral aspects that probably contribute to parenting stress. These aspects include the frequency of the behavior and how problematic it is as

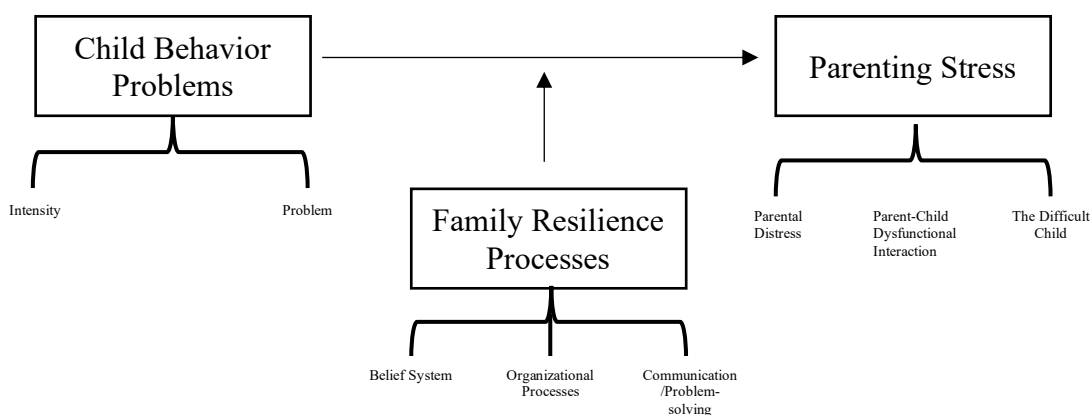
perceived by the parent. This study has further explored the association between child behavior problems and parenting stress through assessing the significance of two behavioral elements in developing parenting stress. Hypothesis 1 and 2 predict that both behavior intensity and behaviour troublesomeness will yield significant positive association with parenting stress.

A considerable body of research that focused on families of children with disabilities have indicated a potential association between behavior problems and parenting stress. However, the new movement of research should shift toward exploring more protective factors that might moderate this association. While there has been some research that examined social support and family characteristics as protective factors, much is needed to be done in order to assess the generalization of such factors cross-culturally using more holistic frameworks. Moreover, the abundant amount of research exploring this topic in Western cultures call for more studies assessing the generalizability of the findings and the effectiveness of the examined frameworks developed in Western cultures. Very little research has been done in the middle east, and the United Arab Emirates particularly. Given the increased attention toward promoting full integration of individuals with disabilities in the society, scientific-based evidences are needed in order to guide the public policy makers and stakeholders.

Therefore, this study was conducted in families of atypically developing children in Dubai to examine the effectiveness of family resilience processes as potential protective factors that may moderate the impact of the child behavior problems on parenting stress. The family resilience processes model is attracting considerable interest in research due to its holistic feature that extends the individual level. While recent research has examined the effectiveness of family resilience processes on youth, no research has been conducted to examine the framework effectiveness on moderating the stressful experiences of parents, who are considered to be

significant role players in the family system. The family resilience processes model was selected due to its elements' flexibility and relevance to the cultural and social contexts in the country. In Hypothesis 3, I premised that the family resilience processes might moderate the association between child behavior problems and parenting stress due to the society's strong adherence to their culturally and religiously rooted values of interdependence and the God's purpose for adversity.

Figure 1  
*The Study Framework*



## RESEARCH METHODOLOGY

### *Data collection strategy*

An IRB approval for conducting an international study was obtained in June 2022. Next, the process of obtaining an official agreement to use the Eyberg Child Behavior Inventory (ECBI) and the Parenting Stress Scale (PSI-4-SFV) took place between August 2022 and November 2022. The centers were officially contacted through emails, phone calls, and over Zoom to explain the study purpose and procedure between November 2021 and February 2022. I have contacted over 20 schools and special needs centers, and 3 centers agreed to be a recruitment site for the study, of which one was a federal center, one was a local center, and one is a private center. A sample of 37 parents (either father or mother) of a child with a disability



receiving special needs services were recruited using a nonprobability sampling method. From the total number of participants, data from only 20 parents were included in the study. All data from the remaining participants were missing. Participants were approached through the schools or centers' administrations provided an access to the survey link.

A 30-minutes closed-ended online survey was developed using Qualtrics survey software, and it was available in two languages: Arabic and English. The Arabic translations of the scales were already developed by the publishers. The survey link was open for one month to provide parents with sufficient amount of time to participate in the study. Participants were given a brief introduction about the research topic and the purpose of the study in addition to an estimation of time required to complete the survey. Participants were ensured that they can take their time to answer the survey, and stop at any time without any penalty. They were also ensured that their responses will be kept confidential and will not be released to anyone. All data were stored digitally on a secure server and on an account that is password protected.

#### *Sample characteristics*

The sample included 20 parents (either father or mother) of a 3 to 12-year-old child with a disability receiving special needs services either in mainstream schools or special needs centers in Dubai. Participants from all nationalities and backgrounds were permitted to contribute to the study.

#### *Measures*

Three measures adopted from previous scientific studies with good reliability scores were used in the current study. An official agreement was signed in order to use the scales. The Arabic translations of the scales were already developed by the publishers.

*The Parenting Stress Index-Short Form (PSI; Abidin, 1995).* The short form of the PSI is a self-report measure that consists of 36 5-point Likert-scale type of questions, of which each 12 items constitute a separate subscale. The three subscales were combined and used as a single measure. Parental Distress subscale assesses the distress experienced by parents due to personal factors, such as depression of relationship issues. The Parent-Child Dysfunctional Interaction subscale yields an indication score of the parent's perception about their interactions with the child and how satisfied they are with these reciprocities. The Difficult Child subscale aims at providing an indication score of the parent's perceptions of their child self-regulation abilities. According to the PSI-4-SF developers, the scale takers can possibly belong to one of three categories assigned based on their total score, and they include the normal range score, high score, and clinically significant score. The PSI has shown strong reliability (Abidin, 1995) and validity in research targeting families of children with developmental disabilities (Hanson & Hanline, 1990). In this study, Cronbach's alpha for the PSI items was .941. It has been translated to many languages, including Arabic.

*The Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999).* The ECBI is a short instrument that includes of 36 items designed for parents to rate their child disruptive behavioral problems. The measure is addressed for children aged between 2 and 16 years old. The measure includes concise description of the child behaviors, which makes it easier for parents to comprehend. The ECBI consists of two major subscales. The two subscales were separated as they provide independent indications. While the Intensity Subscale measures the frequency of the behavior occurrence on 7-point scale, the Problem Subscale assesses how problematic the behavior is perceived by their parents as yes-or-no question. According to the scale developers, a total score of 131 and above on the ECBI Intensity Subscale should indicate a potentially

significant psychopathology, while a total score of 15 or higher on the ECBI Problem subscale indicates that a parent is significantly bothered by the conduct problems of the child. Both subscales have demonstrated high internal consistency across different sociodemographic backgrounds (Colvin, Eyberg, & Adams, 1999). The correlation between child behavior problems intensity and child behavior problems troublesomeness was investigated using Pearson correlation coefficient. There was a strong, positive correlation between the two variables,  $r=.817$ ,  $n=20$ ,  $p < .004$ , with high levels of behaviors intensity associated with high levels of behavior troublesomeness.

*The Walsh Family Resilience Questionnaire (WFRQ; Walsh, 2021).* The WFRQ is a 5-point Likert-scale type of measurement that includes 32 items with three main subscales. The three subscales were combined and used as a single measure. The belief systems subscale consists of 13 items, the organizational processes subscale includes 9 items, and the communication/problem-solving subscale includes 10 items. The belief systems questions reflect how the family is interpreting the adverse experience they are collectively going through in addition to the effect of spiritual values and transcendence on their experience (e.g., we view distress with our situation as common, understandable; we share important values and purpose that help us rise above difficulties). Questions related to the organizational processes measure the flexibility, connectedness, and use of social and economic resources in the family (e.g., we are flexible in adapting to new challenges; our family respects our individual needs and differences; we can rely on support of friends and our community). The communication/problem-solving subscale aims at assessing the quality of communication among family members such as how clearly they communicate their needs and emotions in addition to how cooperative they are in solving problems (e.g., we are clear and consistent in what we say and do; we show each other

understanding and avoid blame; we collaborate in discussing making decisions, and we handle disagreements fairly) (Walsh, 2003). The WFRQ is a newly developed measure that has demonstrated reliability and acceptable psychometric properties (Duncan et al., 2020). In this study, Cronbach's alpha for the WFRQ items was .960.

### *Analytical strategy*

All of the statistical analyses were conducted using IBM SPSS Statistics 26. The association between child characteristics (i.e., gender, type of disability, disability severity) and parenting stress were assessed by conducting Mann-Whitney U Test and two independent Kruskal-Wallis Tests, respectively. These analyses were included in the study to further compare the results of this study with previous studies cross-culturally.

The first and second hypotheses on the correlation between behavior problems and parenting stress was tested using Pearson correlation technique. The first hypothesis assessed the relationship between the intensity of the behavior and parenting stress, while the second hypothesis assessed the relationship between the troublesomeness of the behavior and parenting stress.

In order to investigate the third hypothesis which addresses the moderation effect of family resilience processes on the relationship between child behavior problems and parenting stress, the child behavior problems and family resilience variables were centered and an interaction term between both was created. In the following step, both variables and the interaction term were included in a standard multiple regression to test the association between child behavior problems (independent), parenting stress (dependent), and the family resilience processes (moderator). All variables were treated as continuous variables.

## RESULTS

Participants' mean age was 38.3 years old. Parents who participated in the study were primarily mothers raising a child with a disability (85%), whereas fathers comprised 15% of the total participants. Parents who are originally from the United Arab Emirates (UAE) comprised the largest group of participants, while other participants represented various countries including Oman, India, Pakistan, Syria, and the Philippines. The majority of participants identified their religious affiliation as Muslims (90%), and the remaining identified their religious affiliation as Hindu or Catholic. While a small percentage of participants described themselves as very religious, most parents described themselves as religious only. Most of the parents indicated that they and their partners are full-time employers while a small percentage of participants indicated that they are out of work and looking for work, not looking for work, or unable to work. Most of the participants were educated parents living in the city of Dubai and represent low- and middle-class income families who earn less than AED450,000 yearly. Less than half of the parents reported that they have less than three children, while a greater percentage of families are currently raising three or more children in the household.

In terms of the child with a disability's demographic information results, males predominated the majority. While most children with a disability were between the age of 11-12 years old, quarter of the children were in the age group of 5-6 and 9-10 years old. Autism Spectrum Disorder (ASD) was the most reported type of diagnosed disability, comprising 35% of the total participants, whereas Intellectual Disability (ID) and Multiple Disabilities come as the second and third largest group type of diagnosed disability, respectively, as indicated by their parents. A small percentage of parents reported that their child has a physical disability, or is diagnosed with a comorbid ASD and Hyperactivity disorder. Half of parents described their

child's degree of disability as moderate, while quarter of them preferred to describe their child's degree of disability as mild or severe. While the majority of parents reported that their child is currently served in a special needs center, a small percentage of parents indicated that their child is receiving some special education services in a mainstream school.

**Table 1**  
*Demographic Information*

Variable	n=20	%
<b>Parent Demographic Information</b>		
Gender		
Female	17	85
Male	3	15
Religious Affiliation		
Muslim	18	90
Catholic	1	5
Hindu	1	5
<b>Family Demographic Information</b>		
Marital Status		
Married	20	100
Total Number of Children		
1	1	5
2	5	25
3	6	30
More than 3	8	40
<b>Child Demographic Information</b>		
Age		
5-6	5	25
7-8	3	15
9-10	5	25
11-12	7	35
Gender		
Female	6	30
Male	14	70
Type of Disability		
Autism Spectrum Disorder	7	35
Intellectual Disability (any type other than Down Syndrome)	4	20
Intellectual Disability (Down Syndrome)	2	10
Physical Disability	1	5
Multiple Disabilities	4	20
Other	2	10
Degree of Disability		
Mild	5	25
Moderate	10	50
Severe	5	25

In terms of the stress experienced by parents, the participants were divided into three main categories based on their PSI total score. The mean PSI total score was 103.19 (SD = 25.7).

Slightly more than half of the parents fit into the normal range (56.3%), while approximately

38% of the parents reported a clinically significant stress score according to the PSI-4-SF developers (Abidin, 2012). Less than 10% of the parents' sample were experiencing a high level of stress, but did not hit a clinically significant score. A Mann-Whitney U Test revealed no significant difference in the parenting stress levels among fathers and mothers,  $U=3.000$ ,  $z=108.00$ ,  $p=.100$ .

In terms of the child behavior problems, all parents in the sample reported an ECBI total score above 15, indicating that they are significantly bothered by the conduct problems of their child on the Problem Subscale.

The mean of the family resilience total score was 123.5 (SD=19.8). More than half of the sample (62%) reported a total score of the family resilience scale below the average score, while 30% of the sample reported above the average score.

The association between child characteristics (i.e., gender, type of disability, disability severity) and parenting stress were assessed by conducting Mann-Whitney U Test and two independent Kruskal-Wallis Tests, respectively. A Mann-Whitney U Test revealed no significant difference in the parenting stress levels of male children and female children with a disability,  $U=35.500$ ,  $z=.908$ ,  $p=.377$ . A Kruskal-Wallis Test revealed no significant difference in parenting stress levels across five different types of disabilities,  $p=.099$ , and across different levels (i.e., mild, moderate, severe) of disability,  $p=.367$ .

Hypothesis 1 and 2: The relationship between the two aspects of the child behavior problems (as measured by the ECBI) and the level of stress experienced by parents (as measured by PSI-4-SF) was investigated using Pearson product-moment correlation coefficient. There was a strong correlation between child behavior problems intensity and parenting stress,  $r=.759$ ,  $n=20$ ,  $p < .001$ , with high levels of child behavior problems intensity associated with high levels

of parenting stress. Moreover, a strong correlation was also revealed between child behavior problems troublesomeness and parenting stress,  $r=.902$ ,  $n=20$ ,  $p < .001$ , with high levels of child behavior problems troublesomeness associated with high levels of parenting stress.

*Hypothesis 3:* Standard multiple regression was carried out to investigate whether the effect of child behavior problems (ECBI) on levels of stress experienced by parents (PSI-4-SF) raising a child with a disability differs for families with different family resilience levels (WFRQ). To avoid potentially problematic high multicollinearity with the interaction term, the child behavior problems and family resilience variables were centered and an interaction term between both was created. Both variables in addition to the interaction term were included in the regression model. The results revealed no significant variance in the level of stress experienced by families with different family resilience levels,  $p=.692$ , indicating the lack of potentially significant moderation between child behavior problems and family resilience processes on parenting stress.

**Table 2**  
*Multiple Regression Model to Assess the Moderation Effect*

Variables	t	Significance
Family Resilience (Centered)	1.142	.305
Behavior Troubledness (Centered)	3.632	.015
Family Resilience (Centered) * Behavior Troubledness (Centered)	.419	.692

*Note.* Dependent variable: Parenting Stress

## DISCUSSION

The sample in this study, despite its small size, reflected the diversity of the United Arab Emirates (UAE) population (The United Arab Emirates Government Portal, n.d.) that embraces people with different nationalities and various religious affiliations and socioeconomic status. People from the UAE, Syria, Oman, Pakistan, Philippines, and India with different religious affiliations have contributed to the study. The majority of parents reported that they are raising a male child with atypical development, and this finding is consistent with what has been reported



in previous studies showing the high prevalence of developmental delays among boys compared to girls (Zablotsky et al., 2019). Autism Spectrum Disorder (ASD) has grabbed the scientific community's attention in the field of developmental science over the past 60 years, and it is growing enormously in the past 20 years due to the increasing awareness and prevalence of the disorder. About 78 million people in the world have been diagnosed with ASD, with a 1.4% increase from 2009 to 2017 (Zablotsky et al., 2019). The majority is lacking the access to adequate services (Lord et al., 2021). ASD has been predominated this study's child sample characteristics, aligning with the global increase and prevalence of the disorder according to the Centers for Disease Control and Prevention (CDC) (Maenner et al., 2021).

Independent functioning can be challenging for a child experiencing atypical development because of the accompanied adverse behavioral symptoms (Baker et al., 2003), resulting in intense caregiving demands (Floyd & Gallagher, 1997). Such parenting demands exceed the parent's coping ability and resources (Coulacoglou & Saklofske, 2017), which consequently result in high levels of stress experienced by both parents raising a child with a potential developmental delay according to tremendous studies (Baker, 1994; Baker et al., 2002; Baker et al., 2003; Floyd & Gallagher, 1997; Hanson & Hanline, 1990; Woodman et al., 2015). Even though most of the parents in the study were experiencing a normal level of stress, a considerable percentage of parents indicated experiencing a clinically significant level of stress.

The level of stress experienced by parents did not differ among mothers and fathers of children with a disability. This finding suggests that both parents are facing similar parenting demands to raise their child. A similar conclusion was reached by Baker, Blacher, and Edelbrock (2002) as both parents indicated experiencing similar levels of stress associated with their child's behavior. This agreement was especially high in parents of children with developmental delays.

In another similar study by Baker et al. (2003), the findings demonstrated a high agreement between both mothers and fathers in their perceptions of the negative impact or stress related to their child's characteristics, with a higher negative appraisal or stress in families raising a child with a developmental delay compared to families of typical children. However, findings of other studies revealed slight differences in the level of parenting stress between mothers and fathers of children with ADHD or chronic physical condition, with mothers reporting slightly higher stress caused by or related to their child (Pinquart, 2017; Theule et al., 2010).

While the association between parenting stress and the target child characteristics, including the gender, type of disability, and condition severity, did not indicate any possible correlations, different findings were evident in previous studies. A greater stress level was reported by mothers of boys with delays compared to girls (Baker et al., 2002). However, a contrary result was found in Podolski and Nigg (2001) study as higher stress levels were indicated by parents of girls with ADHD compared to boys. A study by Weiss (2002) that compared between stress levels in parents of children with autism spectrum disorder (ASD) and parents of children with mental retardation showed that stress levels were higher in the former compared to the latter. Another study by Walton (2019) revealed similar results as families of autistic children reported poorer family life satisfaction. In line with previous studies, a study by Dumas et al. (2009) concluded that parents of children with autism and behavior disorders reported experiencing greater parenting stress levels clinically and statistically compared to parents of children with down syndrome and normal development. At first glance, one might assume that autism as a type of disorder is the cut-off variable. However, the latest report produced by the Lancet on autism spectrum disorder concluded the heterogeneity of autism and other neurodevelopmental disorders as they reflect neurodiverse population, with autism being

the prototype of this population (Lord et al., 2021). Accordingly, treating autistic and other developmental delayed population as a homogenous group might be irrational. Instead, the behavioral challenges associated with developmental delays might be the mediator that explains such correlations. The study by Baker et al. (2002) where higher stress was experienced by mothers of delayed boys compared to girls, boys also reported higher scores in emotional reactivity, aggression, and externalizing behavior problems compared to girls. Similarly, parents of children with behavior disorders who reported high parenting stress levels also indicated that their children exhibit statistically and clinically higher intense and considerable behavioral challenges. Hastings (2002) suggested that compared to measures of the child's intellectual severity or adaptive functioning, behavior problems measures would more strongly predict parenting stress. This direct relationship was examined by our study and discussed next.

The current's study finding on the strong demonstrated correlation between child behavior problems and parenting stress are in accordance with the previous empirical findings (Baker et al., 2002; Baker et al., 2003; Dumas et al., 2009; Emerson & Einfeld, 2010; Floyd & Gallagher, 1997). However, the present study casts a new light on the aspects of behavior that are associated with parenting stress. Both higher behavior intensity and troubledness were associated with higher parenting stress scores. This might suggest that intervention services should target behavioral challenges that are highly frequent and seem to be more problematic to the parent, taking the parent's perspective into account to develop the treatment plan.

Apparently, one might think of targeting child behavior problems as a solution for decreasing the levels of stress experienced by families of children with developmental delays. Such solutions have been already worked on effortfully in the field of applied behavior science. Services and application of behavior analysis by behavioral experts and technicians has been

recognized internationally (The Association for Behavior Analysis International (ABAI), n.d.). However, it is crucial to note that not all families of children with developmental delays have access to such services. According to a systematic analysis for the Global Burden of Disease Study (2016), about 95% of the global total number of children younger than 5 years who had developmental disabilities live in low- and middle-income countries (Olusanya et al., 2018), that would probably have limited access to suitable health-care, education, and social services (Lord et al., 2021). Moreover, the global lockdown that resulted from the spread of COVID-19 pandemic had an impact on families on many aspects. Parenting stress has significantly increased during the pandemic (Hiroaka & Tomoda, 2020). Additionally, the pandemic caused changes in access to educational and healthcare services for people with developmental delays. Around 78% of families in countries other than the USA and 74% in the USA indicated that their child has lost access to at least one therapy or educational service (Jeste et al., 2020). The implication of these findings is that more feasible and practical protective factors must be explored to improve the quality of life of families of individuals with developmental disabilities. Promising solutions should take into account and value the heterogeneity of the target group and their families that are nested within diverse cultures and societies. Therefore, this study looked at family resilience processes as possible moderators as discussed next.

Little or nothing is known about the role of family social, psychological, organizational and economic resources in alleviating the adverse outcomes associated with disability. Lord et al. (2021) suggested that developing new models for empowering individuals with developmental disabilities requires valuing the diverse cultural and family systems. Walsh's (2016) family resilience model addresses that need. However, our findings did not yield any potential

significance. A major source of limitation is due to the small sample size (N=20). Small sample sizes tend to prevent the results from being validly analyzed (Faber & Fonseca, 2014).

Yet, while there are no studies that have looked at the Walsh's (2016) family resilience framework as a potential moderator in the parent-child dyads in families of children with disabilities, some existing studies have assessed few concepts that might be equivalent to some key processes included in the proposed examined model. For example, lower hope levels were associated with higher maternal depression and paternal anxiety and depression (Lloyd & Hastings, 2009). Furthermore, in a mixed-method study of Indian families of adults with autism, many families explained the important role of adaptation and adjustment of expectations and daily routines to meet their child's needs. Beyond that, families have described the experience of having a child with a disability as an event that have changed them fundamentally. Many families indicated that they their desire to serve others was provoked as a result of having their autistic child. Other parents indicated that their child has changed them, inspired them, taught them, and made them a better person (Daley et al., 2014). Similarly, parents raising a child with intellectual disability indicated that many positive changes on the family and extending to the wider community were brought by their child, and they include improved personal strength, increased life appreciation, celebration of child's achievements, increased faith/spirituality and valid relationships. These statements reflect coping strategies that are meaning-focused, which were suggested by the authors as parenting interventions for families who are incapable of perceiving the positive aspects of their experience with their child (Beighton & Wills, 2017). Moreover, a qualitative study on Latter-Day Saint (LDS) families of children with developmental disabilities concluded that families share a perceived spiritual perspective framed by religion on their experience with their child (Marshall et al., 2003). Likewise, in another study

on families of children with autism or Down syndrome, parents indicated that adopting a positive attitude and using religion as a reference can act as coping mechanisms at stressful situations (Cuzzocrea et al., 2016). The ideas in these previous studies align with making meaning of adversity, maintaining a positive outlook, and transcendence and spirituality as key processes in the model (Walsh, 2016). Family support was found to be the most vital type of support for families of children with disabilities. However, while family support received by families of children with Down syndrome seemed effective in reducing stress levels, an opposing finding was revealed in families of children with autism (Cuzzocrea et al., 2016). The researchers concluded that the type and quality of support in addition to the person offering the assistance and the context might determine the efficacy of the offered support. These factors were considered in one of the key processes in the Walsh model, which is mobilizing economic and social resources. This concept aligns with the social support notion that have been tested previously. In a study by Fisher et al. (2022), the results revealed that social support acts as a partial mediator in the association between levels of stress and life satisfaction in individuals with developmental disabilities during the COVID-19 pandemic.

## **CONCLUSION, LIMITATIONS, AND FUTURE DIRECTIONS**

This study has examined the Walsh's family resilience processes as protective factors in the association between child behavior problems and parenting stress in families raising a child with a disability in the Emirate of Dubai, United Arab Emirates. Research on individuals with developmental disabilities and their families is scarce in the studied region (Alnema et al., 2017). However, it is crucial to note that it is emerging (Alnema et al., 2017) as a result of the rising needs and awareness of communities in addition to individuals with disabilities and their families. The diversity that characterizes the community of individuals with disabilities calls for

more flexible, feasible and comprehensive systems of care that focus on the family as a central element. The Walsh's family resilience theoretical framework was chosen because of its novelty in embracing flexible elements that can be relevant to diverse social and cultural contexts. Moreover, there is no study to date has examined such comprehensive framework in families of children with atypical development.

In the first and second hypotheses, I predicted that the extent of the behavior troublesomeness and intensity will yield significant association with parenting stress. I have also hypothesized that the family resilience processes might act as a moderator in the association between child behavior problems and parenting stress. The association between child characteristics (i.e., gender, type of disability, severity) and parenting stress were also examined.

The results on the association between child behavior problems and parenting stress followed a similar pattern of findings in previous studies which revealed a strong correlation between both variables. However, a further novel finding in this study concludes that the intensity aspect of behavior in addition to the troublesomeness aspect of behavior, that is, how problematic it is as perceived by the parent, are both strongly associated with parenting stress. Thus, the first two hypotheses were supported. Our findings on the moderation effect of family resilience processes did not show statistical significance, although some key processes in the model were examined separately in similar concepts and showed significant relationships.

The small number of participants is an important limitation of this study and may have impacted my ability to find significant effects and may impacted the reliability and validity of conclusions. The low number of respondents was expected due to the low response rate from schools and centers in addition to the lack of face-to-face interaction opportunity with the parents as a result of the COVID-19 pandemic and time and logistical restraints. Moreover, the survey

was distributed during a busy and challenging time of the academic year, so this might have resulted in schools and centers lack of participation in the study. Another limitation in the current study is that some of the correlations are very high, so there may be concern about whether they are actually assessing the same claimed constructs.

Future directions should address these limitations by considering the factors that might increase the chance of parents and schools' participation. Promising models for families' empowerment should value their diversity and take their perspective into account in developing treatment plans. Although studies on the topic are emerging, much is yet needed to exert a positive impact on the lives of individuals with disabilities and their families. Such efforts should focus on further exploring and examining protective factors and proposing treatment models that can act as immediate solutions for the rising needs and challenges of families raising an atypically developing child. Moreover, intriguing research questions for future studies that could be derived from the current study may include examining the differences between both behavior aspects in their association with parenting stress in addition to disentangling some of the conceptual variables (e.g., parenting stress) and exploring how different stress-related factors in parenting may yield different strength associations with child behavior problems.

The current study's findings have implications for policy makers and interventionists serving individuals with disabilities and their families to consider and value the heterogeneity of the target group and their families that are nested within diverse cultures and societies. Therefore, families' perspective is crucial in the process of developing sensitive treatment and transition plans that are characterized by feasibility and practicality for their child thorough out their lifespan. This might include targeting behavioral challenges that are highly frequent and seem to be significantly problematic to the parent.



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## VITA

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