



**University of Kerbala**  
**College of Nursing**

**The Mediating Roles of Autistic Traits Severity,  
Parental Competence, and Parents Mindfulness in  
Autism Parenting Stress**

**A thesis Submitted by Rabab Khalil Ibrahim**

**To the Council of College of Nursing /University of Kerbala , in Partial  
Fulfillment of the Requirements for the Master's Degree in the  
Nursing Sciences**

Supervised by  
**Prof. Ali Kareem Al-Juboori (Ph.D.)**

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بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

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**Supervisor Certification**

I certify that this thesis which is titled (**The Mediating Roles of Autistic Traits Severity, Parental Competence, and Parents Mindfulness in Autism Parenting Stress**) was prepared under my supervision of the College of Nursing / University of Karbala in partial fulfillment of the requirements for the Master's Degree of Science in Nursing.

College of Nursing

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Signature:

A handwritten signature in blue ink, which appears to be 'Ali', is written over the 'Signature:' label. The signature is fluid and cursive.

Supervisor: Prof. Ali Kareem Al-Juboori Ph.D

College of Nursing\ University of Karbala

Date / / 2023

University of Karbala

جامعة كربلاء



**Approval Certification**

After reviewing the thesis (**The Mediating Roles of Autistic Traits Severity, Parental Competence, and Parents Mindfulness in Autism Parenting Stress**), we certify that it fulfills all the requirements.

*Head of Head of Psychiatric and Mental Health Nursing Department*

*Prof. Ali Kareem Al-Juboori (Ph.D.)*

*College of Nursing / University of Karbala*

*Date: / / 2023*

College of Nursing

كلية التمريض

2012

١٤٤٣ هـ

University of Kerbala

جامعة كربلاء

*Assistant Dean for Scientific Affairs*

*Assist. Prof. Dr. Selman Hussain Faris*

*College of Nursing / University of Kerbal*

*Date / / 2023*



**Committee Certification**

We, the members of the examining committee, certify that we have read this thesis (**The Mediating Roles of Autistic Traits Severity, Parental Competence, and Parents Mindfulness in Autism Parenting Stress**) which is submitted by (**Rabab Khalil Ibrahim**) and we have examined the student's thesis in its contents and what is related to it and we decide that it is qualified for earning the **Master's Degree of Sciences in Nursing** and an estimate of

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Assist. Prof. Zeki Sabah M. (Ph.D)

Member

Date: / / 2023

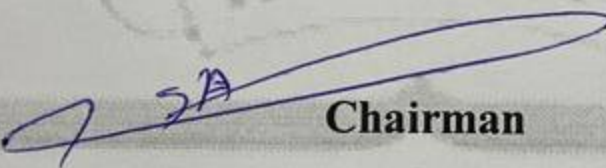
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Assist. Prof. Kareem Rashq S. (Ph.D)

Member

Date: / / 2023



Chairman

Prof. Safi Dakhil Nawam (Ph.D)

Signature

Date: / / 2023



Dean

Prof. Ali Kareem AL-Juboori (Ph.D)

College of Nursing / University of Kerbala

Date: / / 2023

## *Dedication*

*To the first teacher who implanted the ambition and made me the  
imperturbability .. my parents .. Allah guard you.*

*My professor, brothers, friends, and those who had an  
outstanding role in overcoming barriers and difficulties .. those  
who did not hesitate in giving hand to me.*

*To those who made me feel always that they are the greater  
support when I'm breaking, those who instructed and advised me  
about my current project, I express my thanks and gratitude for  
your favor .. I'm asking Allah to bless and guard you.*

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## Abstract

Caring for a child with autism spectrum disorder may have negative effects on a parent's health and happiness. Parents, both mothers and fathers, experience heightened levels of stress within this dynamic. A predictive correlational design study were done to investigate the mediating role of autistic traits severity, Parental Competence and Parenting Mindfulness in Autism Parenting Stress. Holy Karbala City's Al Sibteen Academy for Autism and Developmental Disorders was the site of the study. A simple random sample of 226 parents of children with autism, ages 2-12 years, participated in the research. Subjects' ages, educational levels, and income levels were collected using a standardized questionnaire with the following tools: the autism parenting stress index, the mindfulness in parenting questionnaire, a parental competence and the autism spectrum quotient. Information was gathered from 20<sup>th</sup> November 2022 to 25<sup>th</sup> February 2023 by self-report questionnaire.

The data was analyzed with the help of SPSS (Version 26), a statistical program for social science research on Windows. The study results revealed that parents of children with autism spectrum disorder tends to be severe stressed were 62.8% more than half of parents are somewhat mindful in managing the autism spectrum their children have ( $n = 122$ ; 54.0%), autistic traits severity of children were severe 54% and most of parent's competence (78.3%) for role of parenting. The Parenting Mindfulness and Parental Competence can predict negatively parental stress at (p-value = -.024; -.092) perceptively.

Also, Socioeconomic status and autistic traits severity predict autism parenting stress positively (p-value = .001; .058) perceptively, parents with low socioeconomic status have high level of stress.

More research needed for mindfulness interventional program because descriptive assessment without engagement is less effect on



stress. Furthermore, other demographic variables not included in study need to added.

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### *List of Abbreviations*

<b>Items</b>	<b>Meaning</b>
<b>ADHD</b>	Attention-Deficit / Hyperactivity Disorder
<b>ADOS-2</b>	Autism Diagnostic Observation Schedule, Second Edition
<b>AHRQ</b>	Agency for Healthcare Research and Quality's
<b>ANOVA</b>	One-Way Analysis of Variance
<b>APA</b>	American Psychological Association

<b>APSI</b>	Autism Parenting Stress Index
<b>ASD</b>	Autism Spectrum Disorder
<b>CARS-2</b>	Childhood Autism Rating Scale, Second Edition
<b>CDC</b>	Centers for Disease Control and Prevention
<b>Df</b>	Degree of Freedom
<b>DSM V</b>	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
<b>DSM V-TR</b>	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision
<b>e.g.</b>	For Example
<b>et al</b>	Others
<b>etc.</b>	et cetera
<b>F</b>	Frequency
<b>F S</b>	F Statistics
<b>ICD</b>	International Classification of Diseases
<b>IDD</b>	intellectual or developmental disability
<b>IDDs</b>	intellectual and developmental disabilities
<b>IQ</b>	intelligence quotient
<b>MBCT</b>	Mindfulness-Based Cognitive Therapy
<b>MBPs</b>	Mindfulness-Based Programs
<b>MBSR</b>	Mindfulness-Based Stress Reduction
<b>MPQ</b>	Mindfulness in Parenting Questionnaire
<b>Sig.</b>	Significance
<b>SPSS</b>	statistical package for social science
<b>WHO</b>	World Health Organization

# **Chapter One**

## **Introduction**

## **Chapter One**

### **Introduction**

#### **1.1. Introduction:**

Neurodevelopmental disorders are a collective of disorders that typically begin in early childhood, often before the onset of schooling. Delays in communication, unusual methods of expressing oneself, and unusual interests are signs that something is up with the child's attention, language, cognition, emotion, and social or moral conduct (Yew & O'kearney, 2015; American Psychiatric Association, 2022).

Developmental disabilities or discrepancies may be specific to a particular learning style or executive function, or they may be generalizable to other areas of social or intellectual development (Boyd, 2018).

Individuals with autism have a tendency to focus on non-social stimuli more often than social ones, this tendency may lead to the development of additional social problems and language issues (Di Martino et al., 2014; Hull et al., 2017; Lord et al., 2020). Although autism is regarded as a lifelong condition, symptoms must appear during the early stages of development, and each person with autism has functional impairment to varying degrees as a result of these difficulties. Therefore, figuring out the best way to reduce such challenges is essential for enhancing the long-term results of people with with autism spectrum disorder (ASD) (APA, 2013; Gale et al., 2019; McDaniel, 2022).

Children with ASD may prefer routine and structure that may seem confined and repetitious to others, play alone and retreat from social settings, have trouble comprehending the viewpoints or emotions of others, have special interests or attachments, and play alone. These unusual patterns of behavior may make children with ASD quickly



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irritated, leading to difficult behaviors like temper tantrum (Bluth et al., 2013; Wang et al., 2020).

The family framework involves a dynamic cellular structure that undergoes continuous changes. Parents have a crucial role as caregivers from their children's earliest years until adulthood, especially when it comes to nurturing and directing their children's educational advancement. The stress experienced by parents, known as parental stress, is closely linked to the significant responsibility of raising children. On the other hand, when a child is diagnosed with ASD, the burden of caretaking frequently starts immediately (Foster et al. 2012; Grigoropoulos, 2022).

Caring for a child with ASD may have negative effects on a parent's health and happiness. Parents, both mothers and fathers, who have children with ASD may experience heightened levels of stress within this dynamic. In addition to endangering the parent-child bond, the prolonged duration of caregiving causes parents to experience raised stress, decreased quality of life, increased stress, sadness, and anxiety (Cachia et al., 2016; Di Renzo et al., 2021).

The emotional well-being of the whole family is profoundly affected by an autism diagnosis, as is the child's life. The initial emotions of shock, sadness, surprise, and rejection that parents go through upon learning about their child's diagnosis are often followed by ongoing feelings of the same nature. Coping with demanding therapeutic programs, including implementing treatments at home, and balancing work and family responsibilities adds to the stress experienced by parents, leaving them feeling overwhelmed. It may be a difficult emotional journey for parents and families when they learn that their child has ASD (Hayes et al., 2013; Martins et al., 2015; Efstratopoulou et al., 2022).

Parental stress due to an autistic child has been linked to lower marital satisfaction, higher divorce rates, and negative effects on the

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mental health of children (Osborne et al., 2008; Brobst et al., 2009; Hartley et al., 2010).

Concerning their children's development of skills and general quality of life, parents of children with ASD typically confront several obstacles (Meadan et al., 2010; Tincani et al., 2014).

Parents of children with ASD have elevated psychological distress, which includes symptoms including sadness, anxiety, and different forms of stress, according to studies. This involves elevated somatic symptomatology and a drop in family cohesiveness. Children's Parents with ASD have greater levels of parenting-related stress than children with intellectual or other developmental problems (Martins et al., 2015; Das et al., 2017; Ilias et al., 2018; Porter et al., 2022).

Having an autistic child in the family necessitates that each family member takes on new roles, which can be a source of psychological stress. It is important to develop effective coping strategies to manage this stress, not only in the short term but also in the long term (Al-Suhaimi, 2021).

The significant levels of stress experienced by parents can have a detrimental impact on the parent-child relationship, highlighting the challenges in dealing with a child with ASD (Bonis, 2016; Shepherd et al., 2018).

According to the classification by the American Psychiatric Association in 2013, the severity of autistic traits is categorized into three levels: There is No Support Necessary (Level 1), Support Necessary (Level 2), and Very Support Necessary (Level 3) tiers. Symptoms are listed on a scale from least severe to most severe. The severity of symptoms in children with ASD is correlated with the amount of stress experienced by their parents (Mazurek et al., 2019; Haweel et al., 2021; Porter, 2022).

Due to significant differences in values and social norms between Western and non-Western nations, it is reasonable to expect that parents

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may experience increased stress due to their autistic child's socially inappropriate behavior (Saetermoe et al., 2001; Mak et al., 2010; Ngo et al., 2012).

Children on the ASD are identified by their confined, repetitive activities, speech challenges, and impairments in social interaction (American Psychiatric Association, 2013). These hallmarks of ASD may increase parental stress and have far-reaching consequences for families already struggling to handle the stresses of caring for autistic child (Hutton & Caron, 2005; Fein & Dunn, 2007; Montes & Halterman, 2008; Rao & Beidel, 2009; Meadan et al., 2010; McStay et al., 2014; Boehm et al., 2015).

Stress levels are lower at diagnosis and throughout time for women who use active coping techniques rather than disengaged coping strategies (Feldman & Werner, 2002; Horner et al., 2002; Gray 2003; Hutton and Caron, 2005; Mancil et al., 2009; Gupta, 2007; Efstratopoulou et al., 2012; Hayes & Watson, 2013; Watson et al., 2013; Craig et al., 2016; Barroso et al., 2018).

Autism spectrum disorder symptoms significantly disrupt family life and production requirements in every domain and setting where human prosperity occurs (Baker, & Olsson, 2005; Altieri, 2006; Smith et al., 2010; Shu, 2009).

According to Abidin's model (1995), the parental perspectives and beliefs have the potential to influence the level of stress experienced by parents, which, in turn, can contribute to ineffective parenting behaviors.

Mindfulness in parenting encompasses nonjudgmental acceptance of both one's own characteristics and behaviors, as well as those of their child. It also involves cultivating compassion for both oneself as a parent and for the child, which is demonstrated through the expression of empathetic concern for both the child and oneself (Can et al., 2009; Ketcheson et al., 2022).

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Mindful parenting demonstrates parent–youth relationships by enhancing parent's effects on the family, providing a helpful procedure for families with children who have special needs, boosting trust and emotional sharing, and acknowledging the difficulties faced by mothers of children on the autistic spectrum (Amirlou et al., 2022).

In line with the parents' ideals and priorities, mindful parenting may lead to a decrease in reactive parenting and a rise in the opposite qualities (Duncan et al., 2009).

Parental competence can mediate the care of children with ASD (Mohammadi et al., 2019).

However, studies have shown that parenting competence among parents with autistic children is affected by more factors, and they report lower competence compared to other parents (Liu & Schertz, 2022).

Parent-mediated intervention can enhance parents' competence in supporting parent-child social interactions (Russell & Ingersoll, 2021).

## **1.2. Importance of the Study:**

Children's social and psychological functioning, adaptive ability, and the degree of autistic symptomatology correlate with parental load and stress (Picardi et al., 2018). The relationship development between siblings and children and parents may be hampered and frustrated by the intricacy of ASD symptoms (Sequeira et al., 2012).

Prevalence studies of autism spectrum disorder indicate a steady increase in diagnosis, with the CDC estimating that by 2020, 1 in every 54 American youngsters would have been diagnosed. Autism's incidence and prevalence have risen steadily over the last 50 years in the United States and elsewhere.

This study full the knowledge gap about mindfulness in parents and mediating role of parental competence and autistic traits severity in parenting stress, can help inform interventions to help families identify the



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stress parents of autistic children often experience. It can also reveal the underlying mechanisms of parenting stress in autism and can help to guide the development of educational programs and family support services.

The study can assist in developing more effective strategies for supporting the wellbeing of individuals and families with autism. To effectively provide aid to those needing it, it is important to identify any possible risk factors connected with increased stress levels.

Limited research has been conducted on the relationship between paternal stress and the severity of a child's autism in non-Western countries (Huang et al., 2014; Siu et al., 2019; Porter et al., 2019). While autism symptoms can vary across different cultures, parents from diverse cultural groups may have distinct interpretations of what these symptoms signify (Kang-Yi et al., 2013).

The severity of a child's ASD symptoms has been found to be positively associated with parenting stress, the relationship between the two is not straightforward, and other factors such as child problem behaviors may mediate this relationship (Che et al., 2019; Alquraini et al., 2019; Porter et al., 2022)

Enhancing our general comprehension of autism, this research contributes to a deeper comprehension of the strain placed on parents by autistic children. Overall, investigating the mediating roles of autistic traits severity, parental competence, and parents' mindfulness in autism parenting stress has the potential to advance knowledge, guide interventions, and support parents in navigating the unique challenges they face in raising children with autism (Porter et al., 2019).

### **1.3. Problem Statement:**

Characteristics of the neurodevelopmental disorder known as autism spectrum include impaired social interaction and communication, as well as restricted and repetitive patterns of interests and behavior has an effect

on how a person feels, thinks, interacts with others, and perceives their surroundings, making it much more difficult for them to carry out everyday tasks (Lord et al., 2020; APA, 2022; Porter et al., 2022).

parenting stress is result of parenting demands and child problem so Parents raising these children face unique challenges in their roles (Hayes & Waston, 2013; Giovagnoli et al., 2015; Estes et al., 2013).

Various impairments (e.g., intellectual disability, Down syndrome; Estes et al., 2009; Craig et al., 2016; Hayes & Waston, 2013).

Though there has been much research on parental stress, not nearly as much has been done on the connections between parental stress and parenting competence. This is even though the two can act as a buffer for parents against the severity of autism traits and parental stress (Tint & Weiss, 2016).

One effective coping strategy that promotes parents' wellbeing, reducing stress, anxiety, and depression, and has an indirect effect on promoting child behavior is mindfulness (Govindasamy et al., 2022).

The severity of a child's ASD symptoms has been found to be positively associated with parenting stress (Spannagel et al., 2011; Chan et al., 2018; Miranda et al., 2019; Porter et al., 2022; Kishimoto et al., 2023).

There have been very few studies in an Arab population about parental mindfulness, and this study is the first in Iraq to investigate the role it may play in mitigating the stress experienced by parents of children on the autism spectrum.

#### **1.4. Objectives of the study:**

1. Assess the level of parental stress, parental competence, parental mindfulness, and autistic traits severity.
2. Examine mediating role of parental competence, awareness, and characteristics of autism parental stress associated with autism spectrum disorder is often very severe.

3. Identify which of the variables parent's age, child's age, child's age on diagnosis with autism, family's financial status, can predict more the autism parenting stress.
4. Investigate the difference in autism parenting stress with regard to child's gender, parent's relationship with child, parent's occupation, parent's level of educational.

## **1.5. Research Hypotheses:**

**1.5.1 Hypothesis #1:** There will a statistically directional relationship between autistic traits severity and autism parenting stress.

**1.5.2 Hypothesis #2:** The increase in parental competence, mindfulness will decrease autism parenting stress.

## **1.6. Definition of Terms:**

### **1.6.1. Autism Parenting Stress**

**A. Theoretical Definition.** It the chronic and pervasive psychological distress experienced by parents or caregivers of children with ASD (Hayes et al., 2013).

**B. Operational Definition.** Assess the level of stress express by parent when caring for a child with autism by using Autism Parenting Stress Index.

### **1.6.2. Parenting Mindfulness**

**A. Theoretical Definition.** Paying mindful attention to the child and the approach to parenting, consciously and in the present moment, without making judgments (Kabat-Zinn, 1994).

**B. Operational Definition.** Measurable and observable description of being mindful in parenting role level of awareness of the thoughts, emotions, and sensations during parenting, as well as their ability to remain non-judgmental and engaged with the child in the present moment by using Mindfulness in Parenting Questionnaire.

### 1.6.3. Parental Competence

**A. Theoretical Definition.** It self-efficacy, trust in interpersonal relationships, and compatibility with parental roles (Mondell et al.,1981).

**B. Operational Definition.** It includes the assess parents' perceptions of their own competence in various parenting domains, such as Restoration of family stability excellence in child care and evaluate parents' behaviors and interactions with their child through use of parental competence scale.

### 1.6.4. Autistic Traits Severity

**A. Theoretical Definition.** It the extent or degree to which an individual exhibits characteristics and behaviors associated with autism spectrum disorder including difficulties in social communication and interaction, repetitive and restricted patterns of behavior, sensory sensitivities, and other associated features (Matson et al., 2011; American Psychiatric Association, 2013).

**B. Operational Definition.** The degree which an individual is affected by the autistic symptoms impairments of children relationship with parent and his family, it can range from mild to severe and can be assessed by using the autism spectrum quotient.

# **Chapter Two**

## **Review of Literature**

## Chapter Two

### Review of Literature

#### 2.1. Autism Spectrum Disorder:

Autism spectrum disorder (ASD) is a developmental condition that affects social interaction, communication, and behavior, resulting in impairment. ASD exists on a spectrum, with varying degrees of symptom severity from moderate to severe, depending on the individual (APA, 2013).

It can affect individuals from all racial, cultural, and socioeconomic backgrounds, although it is more prevalent in boys than in girls (Centers for Disease Control and Prevention, 2014).

Parents of children with ASD experience higher levels of stress compared to parents of typically developing children or children with non-ASD developmental issues (DesChamps, 2019).

According to the DSM V-TR, (2022), ASD encompasses various related disorders, including atypical autism, high-functioning autism, Asperger's syndrome, and pervasive developmental disorder.

The diagnosis of ASD tends to remain consistent throughout an individual's lifetime, indicating a high stability of the condition (Stănescu, 2017).

They may also have comorbidities with various medical and psychiatric disorders, meaning they are more likely to have other conditions alongside ASD (Kuhlthau, 2018).

These comorbidities can contribute to additional challenges and complexities in managing their overall health and well-being. Overall, the outcomes for individuals with ASD, including their overall functioning and quality of life, tend to be poorer compared to those in the general

population (Steinhausen et al., 2016; Hirvikoski et al., 2016; Kuhlthau, 2018).

Hyman et al., (2020) propose criteria for diagnosis and assessment. A thorough diagnostic process for autism typically involves gathering a detailed history, conducting behavioral observations, and performing formal assessments to evaluate language, cognitive abilities, and adaptive skills. Parents and caregiver interviews and reports from collateral informants like teachers are often used to gather information on a person's developmental and social background. The histories of development and symptoms might be supplemented using questionnaires.

The diagnosis method relies heavily on behavioral observations performed by qualified clinicians who can recognize autism-related symptoms (Bong et al., 2021).

The correlation between these behaviors and autism is strengthened by these data. To facilitate the observation of autistic-related behaviors, clinicians often use organized observation tools like the Autism Diagnostic Observation Schedule, Second Edition (ADOS-2) and the Childhood Autism Rating Scale, Second Edition (CARS-2) (Ashwood et al., 2016; Zhou, et al., 2021) .

Differential diagnoses for ASD include language problems, intellectual impairments, attention deficit hyperactivity disorder, anxiety disorders, mood disorders, and learning disabilities. These conditions can also co-occur with ASD. Therefore, formal assessments play a significant role in clarifying whether autism is the most suitable diagnosis based on the individual's level of functioning and symptom presentation (American Psychiatric Association, 2013; Hyman et al., 2020 ; Cardinal et al., 2021).

## **2.2. Theoretical Framework:**

In this part of the study, the researcher applied the theoretical framework of the ABCX model to explain family adaptation for families



of children attending an autism. This approach proved to be effective when working with families who had received a diagnosis of ASD.

The ABCX Model of Autism Parenting Stress is a framework developed by Hill (Hill, 1958) to understand the complex interactions and factors that contribute to the stress experienced by parents of children with ASD. This model provides a comprehensive framework for understanding the complex interplay between stressors, resources, coping strategies, and parental adaptation in the context of raising a child with ASD. It highlights the need for interventions and support services that address the specific stressors faced by families and enhance their coping resources to promote positive adaptation and well-being. The model is based on key components: A, B, C and X which represent the primary stressors, resources and coping strategies, and perceptions of stress and adaptation, respectively (McCubbin and Patterson, 1983; Hall & Graff, (2010) and Manning et al., (2012) ) explained components as the following:

**A - Stressors:** The A component represents the primary stressors that parents of children with autism face. These stressors can be categorized into three main types: Primary Stressors are the challenges and demands directly associated with raising a child with autism, including the child's unique communication difficulties, repetitive behaviors, sensory sensitivities, and the need for specialized interventions and support (Hesamzadeh et al., 2015; Joseph et al., 2014; Nasrudin et al., 2018).

Secondary Stressors arise from the impact of having a child with autism on the family's social, financial, and daily functioning. Examples include strained marital relationships, social isolation, financial strain due to therapy costs, and disruptions in daily routines (Lavee et al., 1985; Powell et al., 2008).

Background Stressors are pre-existing stressors that may be present in the family even before the child's autism diagnosis. These could include

personal stressors, such as health issues, job-related stress, or other family-related stressors (Pickard et al., 2017).

**B - Resources and Coping Strategies:** The B component of the ABCX Model focuses on the resources and coping strategies available to parents to deal with the stressors associated with raising a child with autism. Resources can include personal strengths, social support networks, access to healthcare and educational services, financial resources, and coping skills. Effective coping strategies may involve seeking information, engaging in self-care activities, utilizing support groups, and developing problem-solving skills (Deyell et al., 2008; Pickard et al., 2017).

**C - Perception of Stress and Adaptation:** The C component represents how parents perceive and appraise the stressors they encounter and their perceived level of adaptation to these stressors. This perception is influenced by various factors, including the parents' own beliefs, attitudes, coping abilities, and their interpretation of the child's behavior and progress. Positive adaptation occurs when parents perceive that they have the necessary resources and coping strategies to effectively manage the stress, whereas negative adaptation may result when parents perceive overwhelming stress and a lack of support or coping mechanisms (Hesamzadeh et al., 2015; Joseph et al., 2014; Pickard et al., 2017).

**X - Outcome:** The X component of the ABCX Model refers to the outcome or overall level of stress experienced by parents. It takes into account the interactions between the stressors (A), resources and coping strategies (B), and the perception of stress and adaptation (C). The outcome can range from positive adaptation, where parents are resilient and effectively manage stress, to negative outcomes, such as increased parental distress, emotional exhaustion, and decreased well-being (Lavee et al., 1985). In the current study the double ABCX model suggests the theoretical framework (Figure 2) contribute to a parent's experience of

stress: specific stressors (a) autistic trait severity; (b) individual resources (parenting mindfulness), (c) the appraisal of the stressor (parental competence) and(x) Family Adaptation (autism parenting stress).

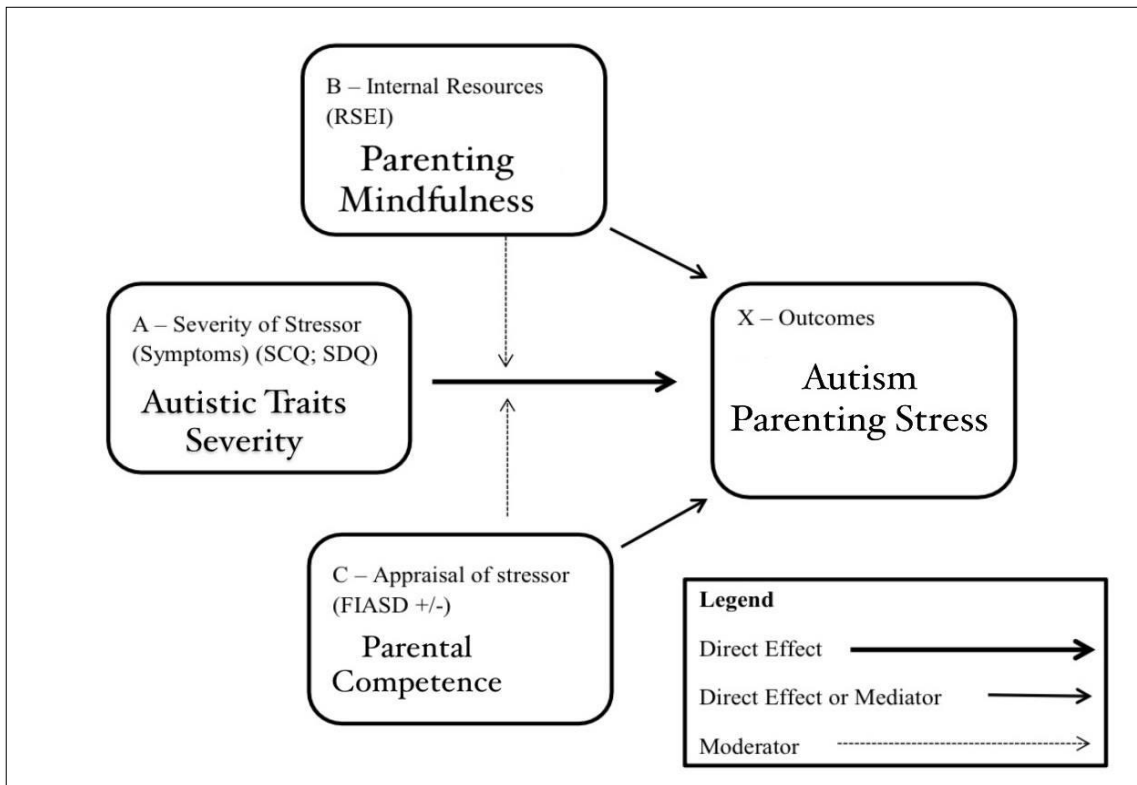


Figure (2.1) ABCX model as theoretical framework.

### 2.3. Prevalence of Autism Spectrum Disorder:

The prevalence and incidence of autism have increased globally in the past two decades (Russell et al., 2015; May et al., 2017; Australian Bureau of Statistics, 2019).

Information regarding autism prevalence in the Middle East, as a collective region, is scarce, with most data available on a country-by-country basis. As a result, people in non-Western cultures, especially the Arab world, may mistakenly believe that autism is uncommon. There has been a lack of comprehensive epidemiological investigations of autism in Arab nations (Taha et al., 2014).

Some Arabic nations have provided few early reports. For instance, in 2002, 42,500 instances of autism were formally reported in Saudi

Arabia, with many more going unrecognized, resulting in an estimated prevalence of 18 cases per 10,000 individuals (Yazbak, 2004).

The majority of cases were found outside Riyadh, with a prevalence rate of 0.6% and a female-to-male ratio of approximately 1:2 (Nilofernaqvi, 2012). The reported frequency in the Sultanate of Oman was 1.4 per 10,000 children (Al-Farsi et al., 2011), UAE national children aged 3 had a prevalence rate of 29 per 10,000 according to a representative sample research (Eapen et al., 2007).

Pediatricians in the Middle East may have less experience when it comes to the diagnosis and treatment of mental illness, Eastern countries lag behind their Western counterparts. The area also lacks sufficient psychiatrists with training in pediatric developmental disorders. However, the influence of culture on autism remains largely speculative, as there is limited research investigating its effects (Samadi and McConkey, 2011). In just a few research, attempts to quantify the financial burden of informal care given by family members have been made (Sharpe & Baker, 2011).

There is an absence of studies that examine the monetary burden of autism in less-developed or semi-industrialized nations. One recent study in Egypt addressed this issue, where the researcher investigated the expenses associated with autism using questionnaire responses from 165 households in the Greater Cairo Region (Mendoza, 2010).

Research consistently shows that parents of children with autism experience more stress, poorer mental health, and adjustment problems than parents of neurotypical children or children with Down syndrome. A variety of theories have been proposed to explain the connection between parents' emotional well-being and their children's behavioral and mental health (Lecavalier et al., 2006; Montes & Halterman, 2007; Weiss et al., 2013; Hartley et al., 2010; Hutchison et al., 2016).

## **2.4. Clinical Diagnosis and Diagnostic Criteria:**

Clinical observations of neurodevelopmental patterns and present symptoms are used to establish a diagnosis of ASD. The Diagnostic and Statistical Manual of Mental Disorders (DSM) and the International Classification of Diseases (ICD) both provide criteria for diagnosing ASD. According to the DSM-5, people with ASD have difficulties communicating and interacting with others that cannot be attributed to typical developmental delays. Disabilities in social-emotional reciprocity, nonverbal communication behaviors, and relationship-building skills are common restricted interests and repetitive patterns of behavior or activities are the second diagnostic criteria for autism spectrum disorder (Mazurek et al., 2017).

May exhibit stereotypical or repetitive speech or movement patterns, rigid adherence to established routines, fixation on narrow topics of interest, or peculiar responses to sensory stimuli(Granieri et al., 2020).

These signs should already be there by the time a child reaches school age, albeit they may not become noticeable until the individual's social demands become too great for their limited resources (Harstad et al., 2015).

The DSM-5, ASD is mentioned that a spectrum of disorders that all share fundamental characteristics but manifest themselves at differing severity levels owing to neurobiological differences. This ranges from extreme academic success to rare hereditary diseases to autism spectrum disorder accompanied by profound intellectual incapacity and linguistic dysfunction, for a correct diagnosis of autism, it's crucial that symptoms not only be present in early infancy but also severely restrict and hamper typical daily activities; otherwise, the disorder may be overdiagnosed (Keller et al., 2019).

### 2.4.1. Early symptoms of Autism Spectrum Disorder:

In the first five years of life, if an infant does not engage in babbling, struggles with pointing at different things, and fails to produce meaningful gestures, it may indicate a developmental concern (Dias et al., 2021; Rocha et al., 2022).

The child grows older, additional signs include a lack of single-word speech by sixteen months, inability to combine two words by two years, and a lack of response to their name (Budisteanu et al., 2022).

Poor eye contact, difficulty in knowing how to play with toys, a tendency to line up toys excessively or focus on a specific object, a lack of smiling, and occasional hearing impairment are potential indicators (Wetherby et al., 2004; Barbar et al., 2009; Ozonoff et al., 2010; Posar, 2022).

### 2.4.2. The core symptoms:

It manifests as a triad of difficulties encompassing communication, social interaction, and restricted and repetitive behaviors as explain in figure1.

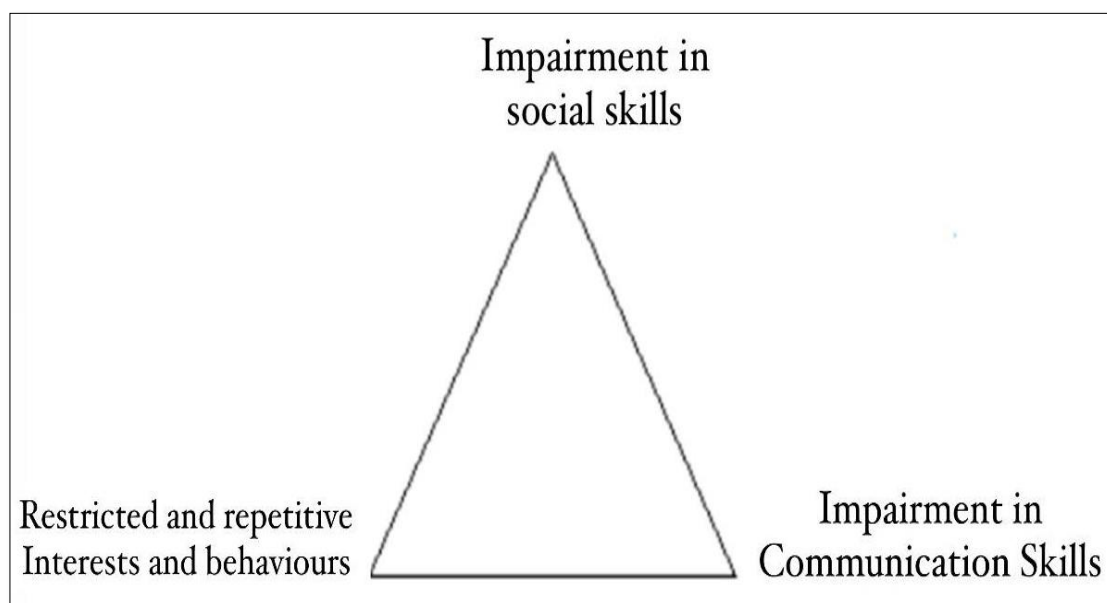


Figure 1. Autistic disorder's "triad of impairments."

The diagnostic criteria for ASD include those symptoms listed in DSM-IV-TR. The DSM-IV-TR criteria for diagnosing autistic disorder include a total of six (or more) items from (1), (2), and (3), with at least two from (1), and one each from (2) and (3) these criteria include:

1. Qualitative impairment in social interaction, as manifested by at least two of the following:

a. marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction. b. failure to develop peer relationships appropriate to developmental level. c. a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest). d. lack of social or emotional reciprocity.

2. Qualitative impairments in communication, as manifested by at least one of the following: a. delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime). b. In individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others. c. stereotyped and repetitive use of language or idiosyncratic language. d. lack of varied, spontaneous, make-believe play or social imitative play appropriate to developmental level.

3. Restricted, repetitive, and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following: a. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus. b. apparently inflexible adherence to specific, nonfunctional routines or rituals. c. stereotyped and repetitive motor mannerisms (e.g., hand or



finger flapping or twisting, or complex whole-body movements). d. persistent preoccupation with parts of objects (Ameis et al., 2018).

They may reject or passively accept attention, displaying unusual expressions of attachment that are challenging to interpret. Understanding others' actions can be difficult for them, and they may struggle with emotional regulation, leading to behaviors such as crying or verbal outbursts that may seem inappropriate to others. Disruptive behaviors and physical aggression further hinder their ability to form social relationships (Bauman et al., 2010; Ning et al., 2021).

Communication difficulties and language problems are often the first concerns reported by parents and a significant source of stress, some children with autism may remain nonverbal throughout their lives, while others may babble during the early months but subsequently stop progressing in language development (Ohta et al., 2018; Wang et al., 2020).

Some children with mild autism may demonstrate delays in language but have a large vocabulary, yet struggle to engage in meaningful conversation. Approximately half of children with autism have limited functional speech and limited receptive language abilities (Rapin et al., 2003; Tager-Flusberg et al., 2005).

Usually, as people become older, they lose the ability to communicate via non-verbal means such as eye contact and gestures. When children with ASD learn to talk, they often have trouble understanding what others are saying (National Institutes of Health, 2020).

Abstract concepts and social language comprehension pose challenges, limiting their ability to engage in imaginative play and hindering social communication with peers. Their play behavior tends to be stereotyped, repetitive, and solitary, adding to the communication limitations they experience (Kim et al., 2014).

Restricted and repetitive behaviors are common among children with autism, although they may appear physically typical in other aspects. For example, they may spend long periods of time lining up toys in a specific order rather than engaging in imaginative play any deviation from their preferred arrangement can cause distress even minor changes in daily routines, such as meal times or bath schedules, can be extremely troubling for them (Leekam et al., 2011; Bishop et al., 2013; Berry et al., 2018; Iversen et al., 2021).

Some children exhibit repetitive movements like arm flapping or walking on their toes. They often demand strict uniformity in their environment and may show continuous interest in repetitive environmental movements, such as opening and closing doors or repeatedly manipulating objects like toys or cooking utensils. Unusual reactions to the surrounding environment can sometimes lead to emotional meltdowns, aggression, temper tantrums, hyperactive behaviors, and self-injurious behavior (Ravizza et al., 2013).

However, there are also associated symptoms that frequently occur but vary in frequency and intensity among individuals. Clinicians diagnosing autism must possess expertise in recognizing these associated symptoms and behavioral disorders. These symptoms are considered significant in relation to autism and may arise from the child's difficulty in coping with environmental demands and physical discomfort (South et al., 2007; Budman et al., 2019; Sparapani et al., 2022).

Some common associated symptoms include hyperactivity, inattention, tics, Tourette syndrome, compulsive repetitions, explosive behavior, self-injury, mood disorders, organic disorders, mania, anxiety, eating disorders, sleeping disorders, separation anxiety, and obsessive-compulsive disorder, presence of these symptoms places additional demands on parents of children with autism, and it is crucial to identify

and address them when formulating intervention plans (Jia et al., 2015; Jones et al., 2018; Mazzone et al., 2018).

While research has extensively explored the core symptoms of autism and their impact on parental stress, there is a lack of information regarding the associated symptoms and their relationship with parental stress (Ameis et al., 2018; Wang et al., 2020).

Children with autism have several difficulties that make it difficult for them to become self-sufficient, including erratic sleep schedules, hyperactivity, sensory disorders, and a lack of flexibility in their behavior. They will always need advice and support as they age and encounter new challenges (Gray et al., 2012; Totsika et al., 2011).

The basic objective of any intervention strategy is to foster autonomy and independence in children with autism, allowing them to flourish without putting undue strain on their families or the community at large. Therefore, it is essential to evaluate the children's adaptive behavior (Yang et al., 2016).

## **2.5. Stress:**

Parenting is a common reaction to the responsibilities and obligations that come with raising a child. It involves a physiological or psychological response to internal or external stressors, resulting in changes in almost every bodily system. This response affects emotions and behavior, intensifies existing negative emotions, and prolongs the impact of stress-related fatigue (Koeske et al., 1990; Peterson et al., 1998; Tahmassian et al., 2011).

Abidin, (1995) defines stress as an excessive feeling of unease and concern associated with being a parent and the interactions with one's child.

Severe stress is indicated by the presence of general adaptation syndrome. Stress can be acute, which is a strong biopsychosocial reaction

to a threatening event that has a limited duration (usually less than a month) but may occur repeatedly, it can lead to physiological overload, potentially harming a person's health (Ogawa et al., 2017; Padden et al., 2017).

Chronic stress, on the other hand, is an ongoing physiological response to continuous events, resulting in the "wear and tear" of the body and negatively impacting overall health and well-being. The adaptive physiological changes that occur during acute stress become maladaptive when they persist, increasing the risk of illness. Distress refers to a negative energy that drains individuals and manifests as anxiety, despair, confusion, powerlessness, hopelessness, and exhaustion. Conversely, eustress is a positive energy that motivates and generates feelings of happiness, hope, and purposeful action. Eustress arises from perceiving a stressor in a positive light (Boyd, 2018; Halter, 2021; APA, 2022; Lievore et al., 2023).

Stressors can stem from various situations, including emotional turmoil, fatigue, anxiety, humiliation, blood loss, extreme happiness, or unexpected success, and they trigger the stress response (Selye, 1993).

These stressors can be broadly categorized as physiological or psychological. Physiological stressors encompass environmental factors such as trauma, extreme temperatures, as well as physical conditions like illness, bleeding, hunger, and pain (Chin et al., 2019; Papp et al., 2020; Vitale et al., 2022).

Psychological stressors include events like divorce, job loss, overwhelming debt, the loss of a loved one, retirement, or the fear of a terrorist attack. Positive changes such as marriage, the birth of a child, or unexpected success can also be psychological stressors (Halter, 2021). The most common of stress theories and models are:

General Adaptation Syndrome (GAS) is one of the foundational theories in stress research. According to this theory, when an organism is exposed to a stressor, it goes through a three-stage physiological response: alarm, resistance, and exhaustion. In the alarm stage, the body mobilizes its resources to respond to the stressor. The resistance stage is characterized by the adaptation and coping efforts to deal with the ongoing stress. However, if the stress continues for an extended period without resolution, the body enters the exhaustion stage, where it becomes susceptible to various physical and mental health problems (Selye, 1950).

**Biopsychosocial Model of Stress:** considers stress as a multidimensional phenomenon influenced by biological, psychological, and social factors. This model recognizes that stressors can originate from various domains, such as work, relationships, or health, and that the stress response involves complex interactions between physiological, psychological, and social processes. The biopsychosocial model emphasizes the importance of considering individual differences, coping strategies, and environmental factors in understanding stress (Engel, 1977).

**Demand-Control Model:** focuses on the relationship between job characteristics and stress. According to this model, job stress arises from the interaction between job demands and job control. Job demands refer to the workload, time pressure, and other factors that require effort, while job control refers to the degree of autonomy and decision-making authority an individual has over their work. High job demands coupled with low job control are associated with increased stress levels, whereas jobs with high control and low demands are associated with lower stress levels (Karasek, 1979).

**Transactional Model of Stress and Coping:**, developed by Richard Lazarus and Susan Folkman, highlights the interactive nature of stress.

According to this model, stress is not solely determined by the objective characteristics of a stressor but also by the individual's appraisal of the situation and their perceived ability to cope. Lazarus and Folkman proposed two types of appraisal: primary appraisal, which involves evaluating the significance of the stressor, and secondary appraisal, which focuses on assessing available coping resources. The effectiveness of coping strategies determines the overall stress response (Lazarus & Folkman, 1984).

Conservation of Resources (COR) Theory: developed by Stevan Hobfoll, focuses on the role of resources in stress and well-being. This theory posits that individuals strive to acquire, retain, and protect their resources, and the loss or threat of resources leads to stress. Resources can be tangible (e.g., money, possessions) or intangible (e.g., social support, self-esteem). Stress occurs when individuals perceive a net loss of resources or an inability to replenish their resources. The COR theory emphasizes the importance of resource investment and stress prevention strategies to mitigate the negative effects of stress (Hobfoll, 1989).

## **2.6. Parenting Stress:**

Parenting involves juggling multiple responsibilities, including acquiring knowledge about long-term child-rearing tasks and understanding them (Deckard, 1998).

Parental stress refers to the frequency of difficulties or discomfort experienced in the process of parenting. While some level of parental stress is considered normal and can even be beneficial, elevated levels of parenting stress can have negative consequences such as reduced quality of life, strained parent-child relationships, and decreased parental self-efficacy (Crnic et al., 1990; Rodrigue et al., 1990; Donnenberg and Baker, 1993; Hastings and Brown, 2002; Guralnick, 2006).

Parenting stress is a common experience that affects all parents to some degree (Abidin, 1992, 1995; Reitman, Currier, & Stickle, 2002).

Various factors, including a parent's perceptions of their child's characteristics and behavior, as well as their beliefs about their own capabilities and the support they receive, can contribute to parenting stress (Abidin, 1995).

Pisula (2011) found that Parents of autistic children experience elevated levels of stress due to three primary factors. Firstly, the characteristics of the child, particularly autism-related behavioral symptoms and challenges, contribute to parental stress. These include dealing with behavioral issues associated with autism. Second, parental stress is exacerbated by a lack of access to medical and educational resources for the child and by the lack of professional assistance and unpleasant interactions between parents and experts throughout the diagnostic process.

Lastly, the stigmatization of autistic people and the general public's failure to comprehend the difficulties that autistic people and their families confront all add up to a stressful situation for everyone involved. All of these things make life more difficult for parents of children with autism.

Rivard et al., (2014) study found that while parenting a child with ASD, fathers (61%) experience greater levels of stress than their counterparts (54%) . Both parents had to participate in the research, and the child being diagnosed had to be between the ages of 2 and 5 years old, there are two key explanations for why fathers in the research experienced more stress than mothers, despite prior studies' findings to the contrary.

The majority of research suggests that parents of children with ASD or other developmental disorders experience higher levels of stress compared to parents of typically developing children or those with other



disabilities (Padden & James, 2017; Dykens et al., 2014; Hartley et al., 2012;). In a study conducted by Estes et al. (2013),

Researchers examined parental stress and psychological distress experienced by mothers of children with ASD, developmental delay without ASD (DD), and typically developing children (TYP). The findings revealed that mothers of children with ASD had higher scores on measures of parental stress and reported more problem behavior compared to mothers in the DD and TYP groups (Ilias et al.,2018; Miranda et al.,2019; Rodriguez et al.,2019).

It is important to recognize that autism is a complex condition, and maternal stress related to behavioral issues is just one aspect of the overall experience (Eisenhower et al., 2005

Bebko et al. (1987) utilized the Childhood Autism Rating Scale (CARS) to assess the severity of child behaviors, allowing parents to rate their child's behaviors on a 4-point scale ranging from normal to severe. Professionals also evaluated the perceived stress experienced by parents for each symptom. The study revealed that nonverbal communication and cognitive disability were among the most stressful aspects reported by many parents

## **2.7. Stress in parents of children with ASD:**

Various factors, including the child's abilities, play a significant role in determining the level of stress experienced by parents when trying to meet the additional expectations and demands associated with raising a child with autism. Caregivers of autistic children often face heightened stress due to the unique needs and challenges associated with parenting (Factor et al., 2017).

This can be attributed to the use of more complex teaching techniques required in the upbringing of these children. Parental stress in families with children who have developmental delays, such as autism

spectrum disorders, has received considerable attention over the past three decades (Gupta, 2007; Baker et al., 2003; Webster et al., 2008).

Abidin's (1992) theoretical viewpoint on parental stress, which takes an ecological and systemic view of family dynamics, posits that factors unique to both the child and the parents contribute to parental stress.

Davis et al., (2008) found that communication and cognitive impairments are additional factors linked to parental stress in parents of children with autism. Similarly, Phetrasuwan and Shandow Miles in 2009 discovered that behavioral symptoms were the primary cause of stress in mothers of autistic children.

Parents of children with developmental delays may also experience elevated levels of parental stress due to the presence of more challenging behaviors and lower adaptive abilities in their children. Several studies have shown that these parents experience higher stress levels compared to parents of typically developing children (Eisenhower et al., 2005; Hodapp et al., 2003; Johnston et al., 2003; Hayes et al., 2013).

Extensive research utilizing various stress measures consistently demonstrates that raising a child with ASD is associated with more stress compared to raising typically developing children or children with other disabilities (Crnic & Greenberg, 1990; Baker-Ericzen et al., 2005; Hastings et al., 2006; Hoffman et al., 2009; Fisman et al., 2000).

Comparison to parents of children with developmental delay, Down syndrome, fragile X syndrome, intellectual disability, cerebral palsy, and cystic fibrosis, parents of children with ASD report higher levels of stress (Blacher & McIntyre, 2006; Hayes & Watson, 2013; Estes et al., 2009).

The parents of children with ASD experience stress levels similar to parents of children with externalizing behaviors, attention-

deficit/hyperactivity disorder (ADHD), and fetal alcohol syndrome (Donnenberg and Baker, 1993; Dumas et al., 1991).

Reduced parental involvement, ineffective communication, and a lack of clear boundaries are all associated with increased stress in parenting (Osborne & Reed, 2010).

Green and Carter, (2011) discovered that a child's improvement in daily living skills was associated with a reduction in parental stress, controlling for age, developmental stage, autism severity, and problem behaviors. The correlation between children's independence in everyday life and parental anxiety increased over time, especially between the ages of 28 and 52.

There is currently limited evidence regarding the correlation between parental stress and educational attainment among parents, as there is a lack of research on parental emotion regulation or stress (Di Renzo et al., 2021).

Hastings et al., (2006) mentioned that mothers of children with ASD experienced higher levels of stress compared to mothers of children with other disabilities,

While both mothers and fathers of children with ASD face significant stress, recent research indicates that women experience higher levels of stress compared to men (Dabrowska & Pisula, 2010; Herring et al., 2006; Tehee et al., 2009). The causes of stress may differ between mothers and fathers, as the stress experienced by fathers is partially related to the stress experienced by their wives, whereas mothers' stress is not directly linked to fathers' stress (Trute, Worthington, & Hiebert-Murphy, 2008).

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To evaluate the extent of parenting stress, Madarevic et al., (2022) conducted a cross-sectional study involving 42 mothers of preschoolers, both with and without autism. The researchers observed interactions between the mothers and their children and collected data on parenting behaviors, parenting stress, and externalizing behavior problems in children. The non-ASD group consisted of 21 mothers of children without autism, with 18 of them being boys, aged between 26 and 47 months ( $M = 39.57$  months,  $SD = 6.68$  months).

The ASD group included 21 mothers of children diagnosed with autism, with ages ranging from 32 to 66 months ( $M = 49.76$  months,  $SD = 7.82$ ), of which 18 were boys. Each child in the ASD group had a formal diagnosis based on DSM-IV-TR guidelines. Through the Autistic Expertise Centre, special needs schools, the Centre for Developmental Disorders in Leuven, and a home assistance service for families with autistic children, the researchers were able to reach mothers from the ASD group. For the non-ASD group, they reached out to mothers through regular schools and daycare facilities. The Nijmegen Parental Stress Index - Short was used to measure parental stress. This index consists of 25 questions, and parents rate their level of stress on a 6-point Likert scale, ranging from 1 (completely disagree) to 6 (absolutely agree). The index includes 11 items related to parent-related stress and 14 items related to

child-related stress. Significant differences in parenting stress were observed between the ASD and non-ASD groups using Mann-Whitney U tests ( $U = 56.5$ ,  $p < .01$ ,  $\eta^2 = 0.42$ ). Mothers in the ASD group reported higher levels of parental stress compared to mothers in the non-ASD group, although the relationship was not statistically significant ( $r_s = 0.18$ ,  $p = 0.44$ ) (Grey, 2003)..

Di Renzo et al. (2022) conducted a cross-sectional study to better understand the factors that contribute to parental stress, including the characteristics of the child (gender, age, and severity of ASD), the characteristics of the parents (education level and emotion regulation strategies), and the variables of context (family functioning, couple satisfaction, and treatment duration). There were a total of 61 households (115 individuals; 56 males and 59 females) and 61 individuals (49 males and 12 females) with ASD that participated in the research. The parents completed questionnaires and provided demographic information. The average age of the parents was 41.38 years ( $SD = 6.96$ ), and 90.5% of them were of Italian nationality. In terms of education, 13% had junior high school diplomas or no formal education, 11.3% had professional qualifications, 46.2% had high school degrees, and 29.5% had university or post-university degrees. The majority of parents were female, and they exhibited significant levels of parental stress. Mothers displayed higher levels of parental distress (PD) than fathers, with statistically significant differences ( $t(53) = 2.92$ ,  $p = 0.005$ , small effect size).

The children in the sample had an average age of 56.46 months, and there were positive correlations between the parenting stress subscale "DC" (child-related stress) and the age of the children. The majority of the children (40.7%) had moderate levels of ASD severity, and there were no significant differences in the overall parenting stress scores based on the severity of the condition. In terms of gender, 80.3% of the children in the

sample were male, and there were no significant differences in the parenting stress scores based on the gender of the children. Mothers may be more involved in fulfilling the everyday needs of caring for a child with ASD since they are more often designated as the main caregivers. Community shame, role limitations, and the need to regulate one's conduct are all examples of these burdens (Davis & Carter, 2008; Tehee et al., 2009). Because their partner engages with the ASD child, it is no surprise that some studies have revealed that fathers indirectly feel stress (Grey, 2003).

Although stress levels and correlates may vary across mothers and fathers, its effects are typically unfavorable and may lead to poor relationship satisfaction with the ASD child and direct implications on parental well-being and overall quality of life. Separate studies of the stress experienced by parents of children with ASD may provide light on the underlying causes of the disorder. The study of maternal stress in isolation may provide light on the manifestations of stress in fathers (Trute et al., 2008).

A study conducted by Efstratopoulou et al. in Greece in 2022 aimed to examine the relationship between parenting stress and the severity of ASD symptoms, temperament-related behavioral difficulties, coping mechanisms, and social support. A total of 75 parents who had at least one child diagnosed with autism were selected through simple random sampling. The participants were assessed using three tools: the Child Autism Symptoms ASD Clinical Criteria from the DSM-5, the Parenting Stress Index-Short Form, and the Motor Behavior Checklist for Children. The results showed that the mean total parental stress score was 87.0 with a standard deviation of 17.2, indicating a significant level of parental stress ( $p=0.704^{**}$ ).

In a longitudinal study conducted by Lin et al. (2021), a cross-lagged panel analysis was used to explore the relationship between parental stress and behavioral issues in young children with ASD over a period of 1.5 years. The study included 75 young ASD patients and their parents who participated in both the initial assessment (T1) and a follow-up assessment (T2) conducted approximately 1.5 years later. The assessments involved collecting various measurements. The sample consisted of 75 young children with ASD (62 males and 13 females) out of 90 children (mean age=25.89 months, range=18-42) who were referred by the Interdisciplinary Assessment Centre for Children with Suspected Developmental Delay (IACCSDD) of a teaching hospital. All children, except one who was 42 months old, ranged in age from 18 to 35 months. The parents of these children (71 mothers and 4 fathers) were also included in the study. The first evaluation (T1) had a mean age of 25.68 months (range=18-42 months), while the follow-up evaluation (T2) had a mean age of 43.99 months (range=36-60 months). The majority of the children (90.67%) met the diagnostic criteria for ASD according to the Diagnostic and Statistical Manual of Mental Disorders. Parenting stress was assessed using the Parenting Stress Index questionnaire, which measured stress in both the child and parent domains.

At T1, 19 parents (25.33%) reached clinical thresholds for parental stress on the total Parenting Stress Index, and at T2, 21 parents (28%) reached clinical levels. Similarly, 25 parents (33.33%) reached clinical levels on the PSI-CD at T1, and 19 parents (25.33%) reached clinical levels at T2. On the PSI-PD, 21 parents (28%) reached clinical levels at T1, and 18 parents (24%) reached clinical levels at T2.

Chung et al. (2013) conducted a comparative study involving children who sought mental health care in clinics in Korea and the US. The study spanned from 2004 to 2009 in Korea and from 2005 to 2008 in



the US. The research aimed to explore the relationship between parental stress and child difficulties. The study included a total of 74 participants from each culture. The findings revealed notable differences in the reported relationship between parental stress and child behavior problems among Korean and US parents. Korean mothers reported significantly higher levels of parental stress but fewer issues with child behavior compared to US mothers. In the US group, there was a significant correlation between parental stress levels and child behavior problems, but this association was not observed in the Korean group. These cross-cultural differences highlight the importance of conducting further research in non-US countries to gain a better understanding of the connection between parental stress and child behavioral issues.

Having knowledge of how parenting stress is experienced and reported across different cultures, as well as its association with child problems, can help clinicians better understand and assist clients and families in need. It is worth noting that previous studies examining the link between parental stress and the severity of autism symptoms in children have yielded inconsistent results (Benson et al., 2006; Estes et al., 2009; Crowell et al., 2019; Tsermentseli et al., 2021).

Pastor et al. (2016) conducted a descriptive study with two main objectives. Firstly, they aimed to assess the perceived parental stress in parents of children with Autism Spectrum Disorder (ASD group) and compare it to parents of children with typical development (comparison group) across various domains related to the child and parent characteristics. Secondly, they aimed to investigate whether the level of autism, linguistic prowess, and intellectual capacity were significant predictors of parental stress, specifically in the ASD group. The child characteristics considered in the study were verbal IQ, performance IQ, and severity of autistic symptoms, additionally, the study examined the

relationship between parental resilience and perceived parental stress, particularly in the ASD group. The study included a total of 84 families, with 42 families in the ASD group and 42 families in the comparison group. The findings revealed that parental stress was significantly higher and clinically significant in the ASD group compared to the control group.

### **2.8. Autistic Traits Severity as a causal event for Autism Parenting Stress:**

The traits are considered to be persistent dispositions, whereas the symptoms are the manifestations of those dispositions at specific times (Wright & Kaurin, 2020).

In their 1989 study titled "Assessing Child Symptom Severity and Stress in Parents of Autistic Children," Konstantareas et al. examined the intensity of symptoms in 44 autistic children and the corresponding stress levels experienced by their parents. A 14-item symptom scale was utilized to assess the severity of the children's symptoms, and the parents' own stress levels were measured. The researchers also examined 13 factors related to the child and family to determine their impact on stress and symptom perception. The findings indicated that parents rated the symptoms of preschoolers with autism lower than professionals did. Parents of children with co-occurring conditions reported higher levels of stress. Furthermore, parents with typically developing children reported fewer challenges compared to mothers of autistic children, who also expressed a greater need for support from their partners.

Siu et al., (2019) conducted a cross-sectional study with the following objectives: (1) compare child behavioral traits and parenting stress between two groups (ASD and TD); (2) examine the relationships between autism spectrum symptoms, child problem and prosocial behaviors, and parenting stress in both groups; (3) investigate the role of an ASD diagnosis in parenting stress in a combined sample of both

groups; and (4) test the mediating effects of child problem and prosocial behaviors on parenting stress. The survey was completed by a total of 731 parents, with 554 having TD children and 177 having children with ASD. Most respondents were married, employed, high school graduates, and parents of multiple children. The children ranged in age from 6 to 11 years old and attended mainstream primary schools. The majority of children with ASD were male, consistent with the gender ratio for ASD in Hong Kong. Language delay, ADHD, and learning problems were additional developmental issues found in both ASD and TD children. Bullying and social isolation were reported in both groups, albeit at different rates. The study found a positive correlation between parental stress and autism spectrum symptoms, but this association was influenced by child problem behaviors. The severity of ASD symptoms or awareness of the ASD diagnosis did not appear to be the primary causes of parental stress. Structural equation modeling was used to analyze the proposed pathway model. No significant associations were found between parental stress and the severity of ASD or behavioral issues in children. Parental stress and child behavior issues showed a strong connection at each time point and over time, except for a non-significant association between parental stress at one-time point and the child's internalizing behavioral issues at another time point.

### **2.9. Parenting Mindfulness as a cognitive appraisal of the event:**

According to Albrecht, and Cohen, (2012) and Stahl & Goldstein (2010), mindfulness practices draw inspiration from Buddhism as well as other spiritual traditions such as Taoism, Islam, Hinduism, and Judaism.

Grossman, (2004) explains that mindfulness can be defined as a state of mind, a characteristic or disposition, or a practice/strategy for cultivating a lasting quality.

Baer et al., (2006) identified five specific facets of mindfulness. These include observing, describing, acting with awareness, nonjudgmentally acknowledging inner experiences, and nonreactively responding to inner experiences.

Kabat-Zinn, (1994) were the pioneers in extending mindfulness beyond individual experiences to include interpersonal interactions, specifically within parent-child relationships, mindful parenting comprises three essential elements: sovereignty (acknowledging and nurturing children's individuality), empathy (seeking to understand children's perspectives and thoughts), and acceptance (wholeheartedly accepting children's inner selves, emotions, thoughts, and opinions).

They introduced the concept of mindful parenting as an active, adaptable, and evolving approach. Mindful parenting entails conscious, present-moment, and nonjudgmental parenting, where parents focus their attention on their child and the act of parenting itself (Bogels & Restifo, 2014).

Duncan et al., (2009) proposed five principles related to mindful parenting. Firstly, engaging in attentive listening involves parents dedicating their full attention to the present parenting experience and actively listening to their children, considering their speech, tone of voice, facial expressions, and body language. Secondly, nonjudgmental acceptance of self and child entails cultivating understanding and acceptance of both their own behavior and that of their children, ensuring that thoughts and actions are not influenced by automatic thinking or subconscious biases. Thirdly, emotional awareness of self and child refers to parents' ability to recognize and identify their own emotions, as well as those of their children, enabling conscious and appropriate responses instead of automatic or blind reactions. Fourthly, self-regulation within the parent-child relationship involves parents exercising control over their

emotional responses, maintaining a balanced state even when faced with negative emotions during parenting activities. Lastly, compassion for self and child involves parents acknowledging and appreciating their efforts in their parenting behaviors, avoiding excessive self-criticism, and providing comfort and support to their children when they experience distress..

Parental Mindfulness and co-parenting competence significantly predict parental well-being, significantly impacting children's development (Mafaza et al., 2022).

The founder of the well-known Mindfulness-based Stress Reduction (MBSR) program, Kabat-Zinn (1990, 2003, 2005), defines mindfulness as the intentional and non-judgmental awareness of the present moment, with curiosity and acceptance. MBSR is designed to promote mindfulness (Albrecht, 2015).

Parenting mindfulness, as described by Davidson et al., (2003) and Jha et al. (2010), involves behavioral changes in the brain's attention and emotion regulation regions, along with corresponding subjective changes in adults.

Mindfulness refers to the ability to regulate attention towards present-moment experiences, including sensory input, thoughts, emotions, and physical sensations, while maintaining an open, curious, non-judgmental, and accepting mindset (Kabat-Zinn, 1994; Bishop et al., 2004).

Several Mindfulness-Based Programs (MBPs) have been created under this structure, with Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT) being the most extensively studied and recognized programs (Ridderinkhof, 2019).

Mindfulness-Based Stress Reduction (MBSR) is approach was originally created to help manage mental health issues in individuals with chronic pain, stress, and other medical conditions (Baer, 2003;

Bohlmeijer, 2010). However, it has also proven to be effective in decreasing symptoms of stress, depression, and anxiety and enhancing the quality of life for healthy individuals (Khoury, 2015).

The implementation of mindfulness-based parenting programs has been found to have a positive impact on reducing parental stress and parental and child psychopathology (Bögels et al., 2014; Meppelink et al., 2016).

It decreases the stress and mental health issues experienced by parents of children with ASD. The stress and mental health problems of parents are often associated with the behavior problems of their child, although this connection is not as significant for parents who have high levels of mindfulness, mindful parenting, acceptance, and self-compassion (Weiss et al., 2012; Jones et al., 2014; Neff et al., 2015).

One effective coping strategy that promoting parents' wellbeing, reducing stress anxiety, depression and indirect effect on promoting child behavior is mindfulness (Govindasamy et al., 2022).

Previous study find that parenting mindfulness can Decrease in stress and increase in positive psychological functioning in parents, improved general health, increase parents' quality of life, Positive reappraisal for stress, Improvement in social communication, emotional and behavioral functioning, parental over-reactivity and improvement in parental distress and parent-child interactions (Benn et al., 2012; Dykens et al., 2014; Bruin et al., 2015; Ferraioli & Harris, 2013; Fernandez-Carriba & Bradshaw, 2019; Rayan et al., 2016; Ridderinkhof et al., 2018; Weitlauf et al., 2020).

Singh et al., (2021) reported that Mindfulness-Based Positive Behavior Support program effective in reducing stress and burnout in parents and caregivers of children and adolescents with intellectual and

developmental disabilities (IDD) and ASD and Reduction in the children's aggression and disruptive behavior followed a similar pattern.

Bishop et al., (2004) highlight two basic components of mindfulness: adopting a present-moment orientation characterized by dispassionate curiosity, openness, and acceptance, and the intentional management of attention. These components can be beneficial in addressing the challenges of parenting a child with ASD, fostering understanding, reducing stress, and improving parent-child relationships (Gopalkrishnan, 2021).

Parenting involves highly emotional interpersonal and intrapersonal experiences. The emotional connection between a parent and their child is influenced by how well emotions are aroused, engaged, and regulated (Bögels et al., 2010).

In a preliminary study, Ketcheson et al. (2022) investigated the impact of a 12-week mindfulness yoga program called MYtime on the perceived levels of stress, anxiety, and sadness among urban caregivers of children with autism. A total of 27 parents participated in the study and were randomly assigned to either the MYtime group (n = 13) or the control group (n = 14). The results showed that the control group had similar pre- and post-assessment ratings, indicating no significant changes. However, the MYtime group exhibited reductions in stress, depression, and anxiety levels. After 12 weeks of participation, parents in the MYtime group demonstrated improvements in their PSS and DASS scores by 25% and 49% respectively. In contrast, the control group showed a slight decrease of 5% in PSS scores, but a 17% increase in DASS scores. However, these differences between pre- and post-assessment scores were not statistically significant for either group ( $P > .05$ ).

Based on the findings of Coatsworth et al. in 2010, the mindful parenting program had similar effects to the original program when it



came to child management practices. However, it had stronger effects on mindful parenting and the quality of the parent-youth relationship, as indicated by pre-post analyses of data reported by mothers and youth. Furthermore, studies examining the mediation effect revealed that the mindful parenting program indirectly influenced parent-youth connections by changing parenting practices.

In a study conducted by Cachia et al. 2019 found that mindfulness therapies were successful in reducing stress and enhancing psychological well-being. The researchers examined three different investigations, which included measures of decreased stress and emotional reactivity. Two of the investigations also observed similar positive changes in children's behavior. The findings suggest that mindfulness-based therapy not only improves the behavior of children but may also have long-term benefits for reducing stress and promoting psychological health in parents of children with ASD.

In a study conducted by Ridderinkhof et al. in 2019, eight significant processes of transformation were identified. These processes included tuning in to others, forming connections with peers, stopping, being aware, living in the present moment, letting things be, making choices, and maintaining a calm and composed reaction. The researchers developed a model that represents the direction and interconnectedness of these transformative processes. The findings of the study contribute to our understanding of the various mechanisms of transformation involved in the MYmind program for parents and children with ASD. The study also opens up avenues for discussing the theoretical and scientific implications of these findings.

Mindful parenting demonstrated parent-youth relationships through enhance parent's effects on family, improving trust and emotional sharing and can justify parenting stress in mothers of child with ASD although

provide supportive protocol for families of children with special need (Duncan et al., 2009; Amirlou et al., 2022).

Mindful parenting can reduction of parental reactivity and to increase parenting flexibility, patience, consistency, responsiveness that is in accordance with parents' goals and values (Duncan et al., 2009).

### **2.11. Parental Competence as an Appraisal for stress:**

Competence is a complex concept with various meanings depending on individual characteristics and domains, it can define as sufficient knowledge and skills for successful performance of tasks (Baumrind, 1991).

Parenting competence is defined as knowledge, skills, problem-solving ability, and activity for child care, with knowledge and skills being more important. Maternal competence is the ability to perform maternal roles through interaction with microsystems, particularly the family, and parenting competence is self-efficacy, trust in interpersonal relationships, and compatibility with parental roles. Parents experience varying degrees of stress depending on their life situation, with some facing chronic stress due to exceptional demands from their children, such as those with autism. (Milligan et al., 1998; Hawker., 2007; Nair et al., 2008; Shin et al., 2008; Valloze et al., 2009).

Pridham et al., (1998) provided a definition of parental competence as encompassing knowledge, skills, problem-solving abilities, and active involvement in childcare, with emphasis placed on the importance of knowledge and skills over other attributes. Additionally, Mercer characterized mother competence as the capability to fulfill maternal responsibilities through interactions within microsystems, particularly within the family context.

parenting competence can vary depending on the characteristics of both the parents and the children. Factors such as professional

interactions, learning effective child care techniques, ability to understand a child's emotions, parents' own childhood experiences, mental health, age, self-efficacy, and self-confidence were found to influence parenting abilities. Notably, self-efficacy and self-confidence emerged as significant predictors of parental competence (Montigny et al., 2005; Rowe et al., 2012; Nyitrai et al., 2019).

Studies conducted on parents of autistic children revealed that factors such as stress, depression, family and social support, parental mental and physical health, feelings of guilt related to the child's condition, participation in care programs, and professional support all contribute to parents' self-efficacy, which in turn influences their parenting abilities. Other research also indicated that parents' self-efficacy plays a role in shaping their parenting practices (Culliford et al., 2002; Herring et al., 2006; Rutgers et al., 2007; Stuart et al., 2009; Smith et al., 2010; Ogston et al., 2011).

It is evident that parental actions and skills have an impact on children's social, emotional, and academic development. Therefore, parents with higher levels of self-efficacy demonstrate greater capability in raising their children and exhibit more responsibility, compassion, empathy, and efforts to instill appropriate behaviors in them (Mondell & Tyler, 1981; Stewart, 1984; Mercer, 1995; Secco, 2002; Tarkka, 2003; Sanders & Woolley, 2005).

Parenting competence is skills, knowledge, comfort, and satisfaction regarding successful parenting roles for parents with normal children, while it remains undefined for parents of children with autism (Mercer et al., 2004; Mercer et al., 1998; Mondel et al., 1998; Secco et al., 2002).

The characteristics of (ASD) cause major disturbances in family dynamics and generate needs in all areas and contexts of development.

The specific characteristics of the individual with ASD, in particular the severity of the disorder and behavior problems, are significant sources of parental stress (Altiere, 2006; Smith et al., 2010).

Parental competence and Autism Parenting Stress can be bidirectional relationship, some studies examine the relationship between perceived stress and parenting sense of competence in parents of children with autism and finds that stress is negatively correlated with parenting efficacy and competence (Reparaz et al., 2021).

Children's well-being is linked to parents' well-being, and the quality of parental care affects a child's adjustment, which is influenced by parents' sense of competence in their role as parents (Jandrić et al., 2021)

In a quasi-experimental study conducted by Keen et al. in 2010, the researchers aimed to enhance parenting competence and reduce parental stress by integrating scientifically validated parenting practices into daily routines. Two intervention groups were formed: one receiving a self-directed video-based intervention (n=22), and the other receiving a professionally assisted intervention consisting of a workshop and 10 home visits (n=17). The study examined the baseline scores and the correlation between follow-up scores and baseline scores for the two intervention groups. The findings indicated that there was not much difference between the two intervention groups in terms of average baseline scores (M=25.6). However, at lower and higher baseline scores, the lines representing the two groups diverged, leading to a stronger correlation between follow-up scores and baseline scores for the self-directed group compared to the professionally supported group.

In another study conducted by Mathew et al. in 2019, researchers investigated how parents of preschool-aged autistic children evaluated their parenting skills in relation to the severity of their child's symptoms, their child's socioeconomic status (SES), and their own psychological

health. The study involved 117 preschool-aged children with an Autism Spectrum Disorder (ASD), with 107 mothers and 54 fathers completing questionnaires about their child's ASD symptoms, functioning, their own well-being, and parental competence. Demographic information, including employment, education level, and residence, was also collected. The results revealed that both mothers and fathers in the sample reported significantly higher levels of parenting self-efficacy but lower levels of interest in the parenting role compared to normative groups. Mothers also showed higher levels of pleasure but reported more tension and worry. The severity of a child's symptoms was associated with the mother's perception of their parenting skills, and this association was stronger among mothers from higher socioeconomic status (SES) backgrounds. Overall, paternal parenting competence was not affected by children's adaptive functioning or symptom severity. Lower family SES was somewhat correlated with higher levels of sadness, stress, and anxiety in fathers, but not with the degree or functionality of their child's ASD symptoms.

The nature of parenting a child with autism often requires continuous adaptation to changing needs and circumstances. Parental competence alone may not fully prepare parents for every new challenge or stage of their child's development, resulting in ongoing stress (Hastings et al., 2001; Davis et al., 2008; Giovagnoli et al., 2015).

# **Chapter Three**

## **Methodology**

## **Chapter Three**

### **Methodology**

#### **3.1. Study Design:**

Predictive correlational methodology drove this study, used to establish strength and direction of relationships between or among variables, with the intention of predicting the value of one of the variables based on the value(s) of one or more other variable(s) (Gray et al., 2012).

#### **3.2. Administrative arrangements and ethical considerations:**

Formal administrative approvals to conduct the study were obtained from the following institutions prior to actual data collection:

- A. The General Secretariat of the Holy Husayni Shrine/ Health and Medical Education Authority/ Al Sibteen Academy for Autism and Developmental Disorders (Appendix C).
- B. The research ethics committee at the University of Karbala /College of nursing provided ethical permission for the secrecy and anonymity of the participants' identities as shown in Appendices B.
- C. The research was conducted with approval from the University of Karbala 's College of Nursing, the student researcher contacted the chosen autism center to go through the project's specifics. Participants were informed of the study's overall goals and instructions for filling out the questionnaire to establish their informed consent and make clear that their participation was voluntary. Before, during, and after the study, the student researcher assured participants that their information would be kept confidential. Participants were also given a sketch book for mind activity for children designed by the researcher, and their parents were given a promise that their children's identities would be concealed in any reports or publications resulting from the study.



### **3.3.The Setting of the Study:**

The research was place in Holy Karbala City at the private center Al-Sibteen Academy for Autism and Developmental Disorders.

### **3.4. The Study Instrument:**

Subjects' age, living situation, and family socioeconomic level were measured using the 2016 updates to the B G Prasad and Revised Kuppuswamy socioeconomic scales (Shaikh & Pathak, 2017), which includes the parent's education level (with a maximum of 10 points), the household's occupation (with seven tiers), family's monthly earnings (split into six tiers, the highest of which is worth 10), with the highest tier worth 10 points. That adds up to a total of 40 points. Those with a score of 21–33 are considered upper middle class, those with a score of 20–33 are considered lower middle class, scores between 6 and 14 indicate upper-lower-class status, while scores of 5 and below indicate lower-class status.

1. Autism Parenting Stress Index (APSI), which is a self-report questionnaire consisting of 13 items and is used to assess parental stress in young children diagnosed with autism owing to its influence on a wide variety of core and co-morbid symptoms, were developed with an understanding of the normal progression of s's growth in mind. A child's functioning may be severely impaired by core and co-morbid symptoms, putting stress on parents and perhaps affecting their own mental health. The Silva & Schalock, 2011 instruments are based on a paradigm for autism that treats both comorbid and core symptoms. Parents of autistic children reported feeling "stressed" at a rate of 50 percent. Parents' very high-stress levels in certain regions informed the development of the stress rating scale, which ran from 1 ('Not stressful') to 5 ('So intense that sometimes we feel we cannot manage').

2. The AQ-Child is a quotient for children on the autism spectrum. The AQ-Child (Auyeung et al., 2008) is a questionnaire designed for children to express their level of agreement or disagreement with 50 statements. The five areas are attention to detail, communication, social skills, creativity, and the ability to shift focus and adapt to novel situations are all covered in the questions. The threshold for ASD features was established at a score of 76. The total score was the independent variable in the analysis of ASD characteristics.
3. Parenting Competence Scale: The tool was a parent-report composed of 25 items within 2 domains including (a) excellence in care represented in the questions (4,10-19,21-25) that have to explain stability in the challenging road of child care through tenacity in the arduous process of raising children; teaching a child with persistence, motivation in caregiving via Internal drive for the child and the caregiver Independent incentive for child care based on Trust in one's own abilities to provide for and educate a child Trust in one's own efforts will lead to a better life for the child and (b) reconstruction of the family stability represented in the questions (1-9,20) with subdomains: Organization of family affairs by Planning for family relationships and Planning for family affairs; Coping with the emotional distress caused by the child's condition, Information Seeking, Patient Child Care, and Comprehensive Support; and Adaptation to the current situation by Adapting to the child's illness. On a Likert scale from 1 to 5, parents were asked to rate how they felt about their own answers (1 being the lowest and 5 the highest).
4. Mindfulness In Parenting Questionnaire (MIPQ): designed by McCaffrey et al.,(2017) is a parent-report questionnaire designed to

measure of mindful parenting exists, consist of consists of 28 statements, each with the rating of *1=Infrequently*, *2=Sometimes*, *3=Often*, *4=Almost always*.

the researcher translated instrument forward and backward translation and had them reviewed by two linguistic specialists and one native English speaker and added in appendix (D) for Arabic version and appendix (E) for English version.

### **3.5. Validity of instrumentation:**

The instrument validation indicates how well it reflects or measures the phenomena being examined. The validation procedure is. a result of study validation of an experimental research represents the degree to which the research examines the hypothesis. support for the concept of study, its theoretical framework (Gray et al., 2012). Panel of (11) experts revised the interventional protocol and study instrument. appendix F show that these experts. Each expert member was asked to examine the study instrument's content, simplicity, relevance, style, and applicability.

### **3.6. Pilot study:**

On November 20, 2022, a pilot study was carried out with (25) parents. The pilot study's sample was eventually inserted with the study's initial sample according to Gray et al., (2027) conduct that if there are no modifications to the methods are needed, the data obtained from the pilot study may be included in the actual study data. The goal of the preliminary research is to check the readability of the items as well as the amount of time it takes to complete the study instrument. It took 30-40 minutes to complete the task.

### **3.7. Reliability of the questionnaire**

This study used the Cronbach alpha coefficient test to analyze the internal consistency reliability. The reliability score was Cronbach's alpha for Autism Parenting Stress Index = 0.91; Parental Competence=0.92; Autism Spectrum Question =0.83 and Mindfulness In Parenting Questionnaire =0.89. Nieswiadomy (2012) reported that reliability coefficients of  $\geq 0.70$  are considered acceptable.

### **3.8. Sample and Sampling:**

The study included a probability, simple random sampling, sample of parents whose children have been diagnosed with autism spectrum disorder who agreed to participate in this study. A paper survey was copied and was published on the parents, where the purposes of the research were explained to them and their questions about how to fill out the study survey were answered and explained face to face. The study subjects were recruited from the educational programs and lectures and parents who visit counselling department in Alsbtain academy using a self-reported survey.

The parameters used to calculate the required sample size in G\*Power are as follows: size of impact = 0.25; alpha error probability = 0.05; power = 0.95. Therefore, 226 subjects would be an adequate sample size. There were a total of in this investigation.

### **3.9. Inclusion Criteria:**

Voluntred Parents of children who age from 4 to 12 were after being diagnosed with autism spectrum disorder.

### **3.10. Exclusion Criteria:**

The researcher excluded subjects who have psychiatric disorder, work in psychiatric and mental health nursing or psychiatric medicine and

parents of child with other physical or mental disorder, with autism and comorbid disease and child with communication disorders.

### **3.11. Study Procedure:**

Data were collected using a self-reported instrument. The study data collecting was conducted at Al-Subtain academy at days Thursday and Saturday from 8:00 am to 6:00 pm for the period from November 20, 2022 to February 25<sup>th</sup>, 2023.

### **3.12. Statistical Analyses:**

SPSS version 26 for Windows was used for the statistical analysis (statistical software for the social sciences).

Descriptive Statistical Tests.

- **Frequency of percentage (F):** It was used to describe the sociodemographic characteristics of parents and children.
- **Mean of Score (M.S) and Standard Deviation:** It was used to determine the levels of Autism spectrum severity; Autism Parental stress; Parental competence vlevel and Parental Mindfulness.

### **3.14. Inferential Statistical Tests:**

- **Independent t-test:** The independent t-test, also called the two sample t-test, independent-samples t-test or student's t-test, is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups (Leard Statistics, 2019). It was used for determine the significant differences in Autism Parenting Stress, Parenting Mindfulness, Autistic Traits Severity and Parental Competence among Parents of children who have ASD with regard to their sociodemographic characteristics.
- **Analysis of Variance (ANOVA):** is a collection of statistical models used to analyze the differences among group means and

their associated procedures (such as "variation" among and between groups), ANOVAs are useful for comparing (testing) three or more means (groups or variables) for statistical significance. It is conceptually similar to multiple two-sample t-tests, but is less conservative (results in less type I error) and is therefore suited to a wide range of practical problems (Fisher & Yates, 2016). It was used to determine the significant differences in Autism Parenting Stress, Parenting Mindfulness, Autistic Traits Severity and Parental Competence among Parents of children who have ASD with regard to their sociodemographic characteristics.

- **Hierarchical regression:** A statistical technique used to analyze the relationship between a dependent variable and multiple independent variables. In hierarchical regression, the independent variables are entered into the model in a specific order, with each subsequent block of variables being added to the model after the previous block has been entered. The purpose of hierarchical regression is to determine the unique contribution of each block of variables Parenting Mindfulness, Autistic Traits Severity and Parental Competence among Parents of children who have ASD to the prediction of the Autism Parenting Stress (de Jong, 1999; Lewis, 2007; Richardson et al., 2015)

### 3.15. Study Limitations

The study involves certain limitations including (1) there may be a number of confounding variables that this study did not consider including the living arrangement and type of home; (2) the study used a self-reported study instrument it may be more effective result if being observational or experimental measures.

# **Chapter Four**

## **Study Results**



## Chapter Four

## Study Results

**Table (4-1) Children's sociodemographic characteristics Children's medical profile (N = 226)**

Variable	Frequency	Percent
<b>Child's Age (Years)</b>		
3-5	71	31.4
<b>6-9</b>	<b>144</b>	<b>63.7</b>
10-12	11	4.9
<b>Mean (SD): 6.44 ± 1.73</b>		
<b>Child's Gender</b>		
<b>Male</b>	<b>181</b>	<b>80.1</b>
Female	45	19.9
<b>Child's Age on Diagnosis (Years)</b>		
<b>1-2</b>	<b>122</b>	<b>54.0</b>
3-4	95	42.0
5-7	9	4.0
<b>Mean (SD): 2.57 ± 0.96</b>		

*SD: Standard deviation*

The study results reveal that the children's mean age is  $6.44 \pm 1.73$ ; most aged 6-9-years ( $n = 144$ ; 63.7%), and those who aged 10-12-years ( $n = 11$ ; 4.9%).

Concerning the children's gender, the majority are males ( $n = 181$ ; 80.1%) compared to females ( $n = 45$ ; 19.9%). The children's mean age on diagnosis is  $2.57 \pm 0.96$ ; more than a half were diagnosed when they were 1-2-years-old ( $n = 122$ ; 54.0%), and those who were diagnosed when they were 5-7-years-old ( $n = 9$ ; 4.0%).

**Table(4-2) Parents' sociodemographic characteristics (N = 226)**

Variable	Frequency	Percent
<b>Father's Age (Years)</b>		
26-33	53	23.5
<b>34-40</b>	<b>83</b>	<b>36.7</b>
41-48	69	30.5
49-55	17	7.5
56-61	4	1.8
<b>Mean (SD): 38.83 ± 7.17</b>		
<b>Mother's Age (Years)</b>		
20-27	37	16.4
<b>28-35</b>	<b>104</b>	<b>46.0</b>
36-43	71	31.4
44-52	14	6.2
<b>Mean (SD): 33.71 ± 6.59</b>		
<b>Kinship to the child</b>		
Father	77	34.1
<b>Mother</b>	<b>149</b>	<b>65.9</b>
<b>Father's level of education</b>		
Elementary school	15	6.6
Middle school	28	12.4
High school	24	10.6
Diploma	42	18.6
<b>Bachelor's degree</b>	<b>79</b>	<b>35.0</b>
High diploma	8	3.5
Master's degree	27	11.9
Doctoral degree	3	1.3
<b>Mother's level of education</b>		
Read and write	1	0.4
Elementary school	8	3.5
Middle school	19	8.4
High school	43	19.0
Diploma	49	21.7
<b>Bachelor's degree</b>	<b>89</b>	<b>39.4</b>
High diploma	4	1.8
Master's degree	10	4.4
Doctoral degree	3	1.3
<b>Family type</b>		
<b>Couple only</b>	<b>163</b>	<b>72.1</b>
Couple and husband's family	59	26.1
Couple and relatives	4	1.8
<b>Monthly income (Iraqi Dinar [ID])</b>		

Less than 300.000	35	15.5
300.000 - 600.000	68	30.1
601.000 - 900.000	42	18.6
901.000 - 1.200.000	47	20.8
1.201.000 - 1.500.000	18	8.0
1.501.000 or more	16	7.0
<b>Household's occupation</b>		
Professional	62	27.4
Semi-Professional	84	37.2
Clerical, Shop Owner, Farmer	44	19.5
Skilled Worker	10	4.4
Semi-Skilled Worker	5	2.2
Unskilled Worker	11	4.9
Unemployed	10	4.4
<b>How many children do you have</b>		
1	24	10.6
2-3	121	53.5
4-5	74	32.7
6 or more	7	3.1
<b>Mean (SD): 2.96 ± 1.30</b>		
<b>Socioeconomic Class</b>		
Upper lower class	21	9.3
Lower middle class	69	30.5
Upper middle class	129	57.1
Upper class	7	3.1

\* Percent is not exactly 100.0%

The study results display that the father's mean age is  $38.83 \pm 7.17$ ; more than a third age 34-40-years ( $n = 83$ ; 36.7%), and those who age 56-61-years ( $n = 4$ ; 1.8%).

The mother's mean age is  $33.71 \pm 6.59$ ; less than a half age 28-35-years ( $n = 104$ ; 46.0%), and those who age 44-52-year ( $n = 14$ ; 6.2%).

Regarding the kinship to the child, most are mothers ( $n = 149$ ; 65.9%) compared to fathers ( $n = 77$ ; 34.1%).

With respect to fathers' level of education, more than a third hold a bachelor's degree ( $n = 79$ ; 35.0%), and those who hold a doctoral degree ( $n = 3$ ; 1.3%). Around two-fifth hold a bachelor's degree ( $n = 89$ ; 39.4%), and one who read and write ( $n = 1$ ; 0.4%).

Concerning the family type, most reported that they have been living as a couple only ( $n = 163$ ; 72.1%), and husband's family ( $n = 4$ ; 1.8%).

As per the family's monthly income, less than a third reported that their monthly income ranges between 300.000-600.000 Iraqi Dinar ( $n = 68$ ; 30.1%), and those whose monthly income is 1.501.000 ID or more ( $n = 16$ ; 7.0%).

Concerning the household's occupation, more than two-third are semi-professionals ( $n = 84$ ; 37.2%), and those who are semi-skilled workers ( $n = 5$ ; 2.2%).

Regarding the mean of children in the family is  $2.96 \pm 1.30$ ; more than a half have 2-3 children ( $n = 121$ ; 53.5%), and those who have six or more children ( $n = 7$ ; 3.1%).

Ultimately, more than a half families are classified as of upper middle socioeconomic class ( $n = 129$ ; 57.1%), and those who are of upper class ( $n = 7$ ; 3.1%).

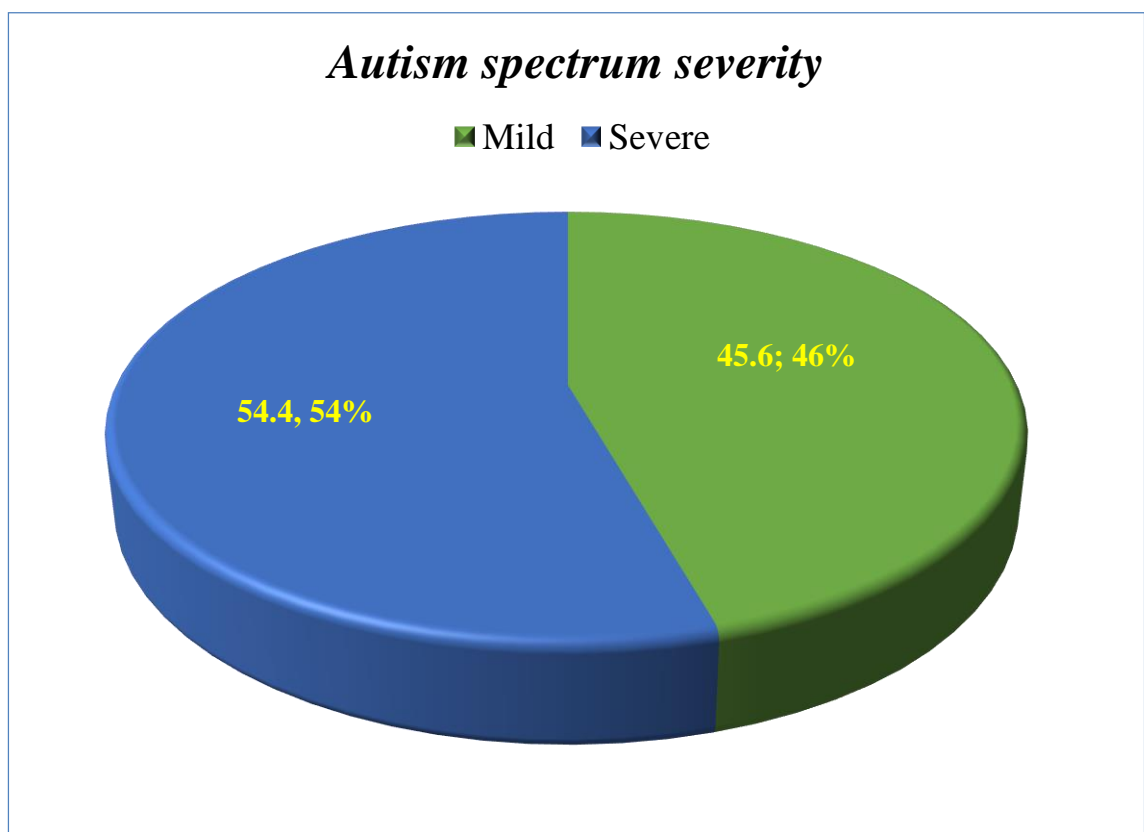
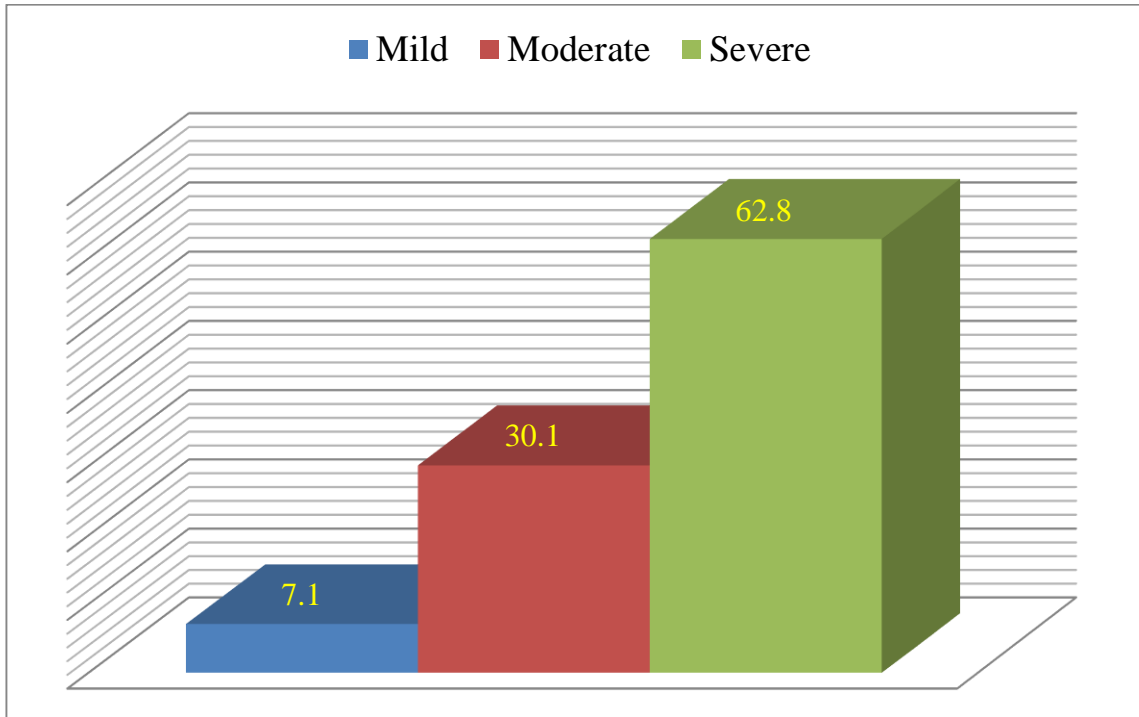
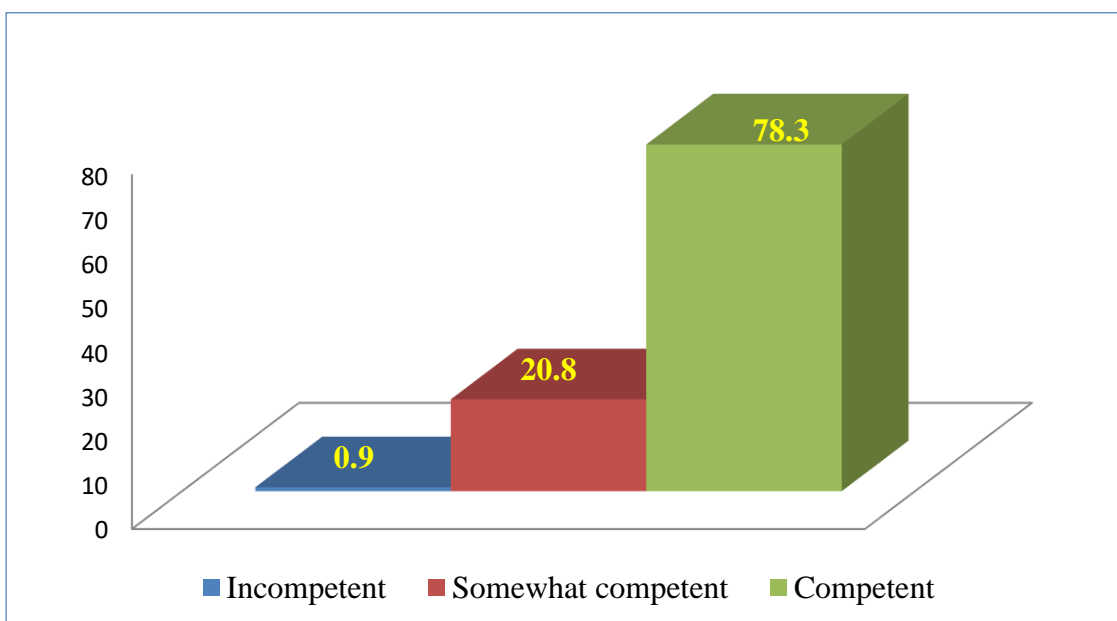


Figure (4-1) *Autism spectrum severity*

The study results demonstrate that the autism spectrum was rated as severe by more than a half of parents ( $n = 123$ ; 54.4%) compared to those who rated it as mild ( $n = 103$ ; 45.6%).

Figure (4-2) *Autism parental stress level*

The study results display that autism parental stress is severe for most of parents ( $n = 142$ ; 62.8%), and mild stress ( $n = 16$ ; 7.1%).

Figure (4-3) *Parental competence level*

The study results display that most of parents are competent in managing the autism spectrum that their children have ( $n = 177$ ; 78.3%), and those who are incompetent ( $n = 2$ ; 0.9%).

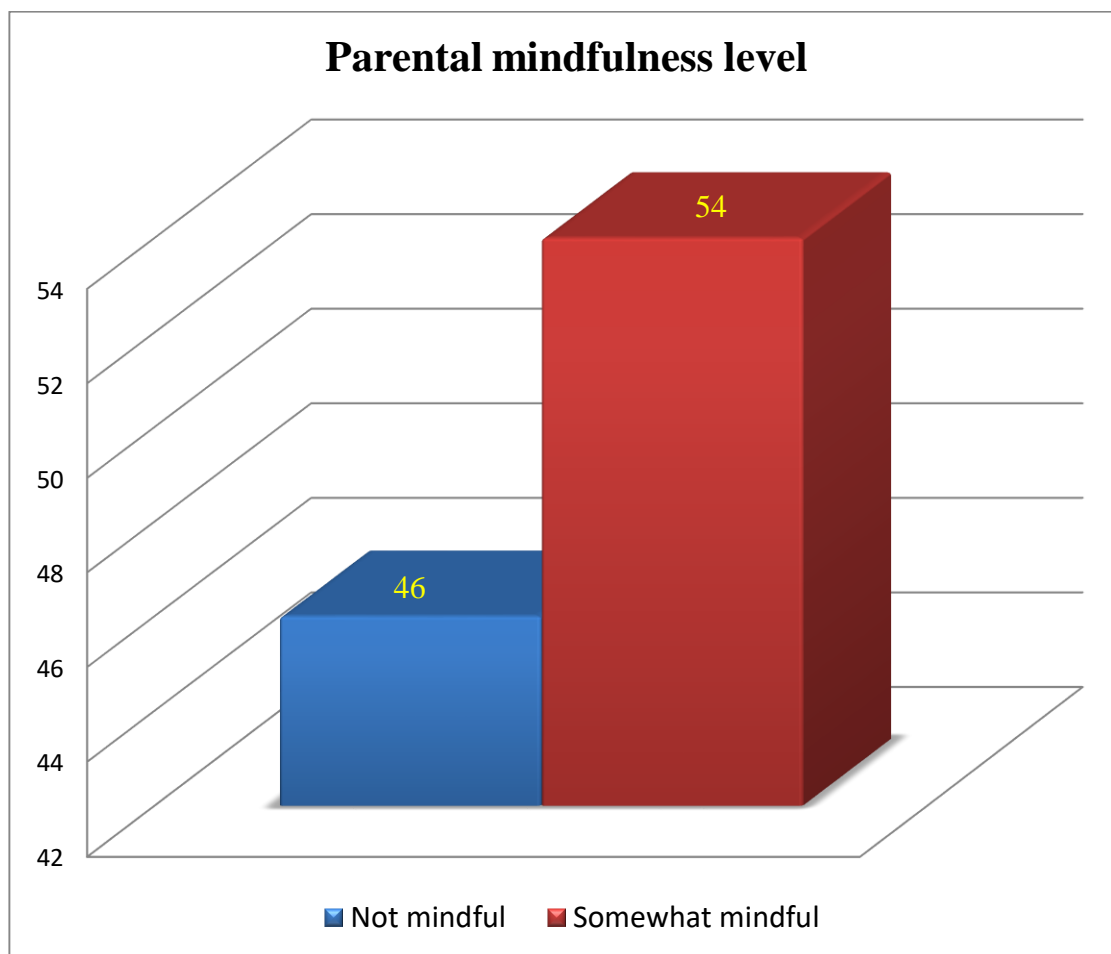


Figure (4-4) *Parental mindfulness level*

The study results exhibit that more than half of parents are somewhat mindful in managing the autism spectrum their children have ( $n=122$ ; 54.0%), followed by those who are not mindful ( $n = 104$ ; 46.0%).

**Table (4-3) Hierarchical regression model for the study variables and parents' autism parenting stress**

Model		Coefficients <sup>a</sup>						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
<b>1</b>	(Constant)	41.795	3.875		10.787	.000	34.159	49.431
	Child's age	-.187	.350	-.036	-.533	.594	-.878	.504
	How old the child was on diagnosis?	.452	.642	.048	.704	.482	-.813	1.718
	How many children do you have?	-.421	.455	-.061	-.924	.357	-1.318	.477
	Socioeconomic Status	.332	.107	.208	3.107	.002	.122	.543
<b>2</b>	(Constant)	63.797	12.828		4.973	.000	38.514	89.079
	Child's age	-.203	.350	-.039	-.578	.564	-.893	.488
	How old the child was on diagnosis?	.574	.647	.061	.888	.376	-.701	1.849
	How many children do you have?	-.310	.456	-.045	-.679	.498	-1.208	.589
	Socioeconomic Status	.350	.107	.219	3.277	.001	.139	.560
	Parental Competence	.017	.055	.021	.303	-.092	.763	.125
	Autism Spectrum Quotient	-.001	.029	-.001	-.021	.058	.983	.057
	Mindfulness	-.433	.191	-.151	-2.269	-.024	.809	-.057

a. Dependent Variable: Autism Parenting Stress

The study results reveal that all regression models display that the family's socioeconomic status and autistic traits severity positively predicts parental autism stress (p-value=0.001; 0.05) respectively. On the other hand, parental mindfulness and parental competence negatively predicts parental autism stress (p-value = -.024; -.092) respectively.

**Table (4-4) Gender-wise differences in the autism parenting stress, parental competence, autism spectrum quotient, and mindfulness**

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Autism Parenting Stress	Equal variances assumed	7.762	.006	3.371	224	.001	6.39337	1.89668	2.65576	10.13099
	Equal variances not assumed			4.111	92.010	.000	6.39337	1.55513	3.30475	9.48199
Parental Competence	Equal variances assumed	.017	.896	.357	224	.722	.66286	1.85857	-2.99965	4.32537
	Equal variances not assumed			.347	65.498	.729	.66286	1.90835	-3.14783	4.47356
Autism Spectrum Quotient	Equal variances assumed	1.312	.253	-1.985	224	.048	-6.98465	3.51933	-13.91988	-.04943
	Equal variances not assumed			-1.865	62.965	.067	-6.98465	3.74558	-14.46969	.50038
Mindfulness	Equal variances assumed	.578	.448	1.120	224	.264	2.22112	1.98234	-1.68530	6.12753
	Equal variances not assumed			1.133	68.524	.261	2.22112	1.96014	-1.68974	6.13197

*df*: Degree of freedom; *F*: F-statistics; *Sig.*: Significance; *Std. Error Difference*: Standard Error Difference; *t*: T-statistics

The study results display that there are statistically significant differences in the autism parenting stress and autism spectrum quotient between gender groups ( $p$ -value = 0.001, 0.048) respectively.



**Table (4-5) Differences in the autism parenting stress, parental competence, autism spectrum quotient, and mindfulness among father's level of education groups**

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Autism Parenting Stress	Between Groups	2239.254	7	319.893	2.466	.019
	Within Groups	28275.313	218	129.703		
	Total	30514.566	225			
Parental Competence	Between Groups	983.916	7	140.559	1.138	.340
	Within Groups	26917.947	218	123.477		
	Total	27901.863	225			
Autism Spectrum Quotient	Between Groups	4215.921	7	602.274	1.346	.230
	Within Groups	97530.858	218	447.389		
	Total	101746.779	225			
Mindfulness	Between Groups	1384.189	7	197.741	1.413	.201
	Within Groups	30517.426	218	139.988		
	Total	31901.615	225			

*df: Degree of freedom; F: F-statistics; Sig.: Significance*

The study results reveal that there is a statistically significant difference in autism parenting stress among father's level of education groups (p-value =0.019).

**Table (4-6) Differences in the autism parenting stress, parental competence, autism spectrum quotient, and mindfulness among mother's level of education groups**

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Autism Parenting Stress	Between Groups	860.071	8	107.509	.787	.615
	Within Groups	29654.496	217	136.657		
	Total	30514.566	225			
Parental Competence	Between Groups	1356.033	8	169.504	1.386	.204
	Within Groups	26545.830	217	122.331		
	Total	27901.863	225			
Autism Spectrum Quotient	Between Groups	1668.193	8	208.524	.452	.888
	Within Groups	100078.586	217	461.192		
	Total	101746.779	225			
Mindfulness	Between Groups	2831.779	8	353.972	2.642	.009
	Within Groups	29069.836	217	133.962		
	Total	31901.615	225			

*df: Degree of freedom; F: F-statistics; Sig.: Significance*

The study results reveal that there is a statistically significant difference in the mindfulness among mother's level of education groups ( $p$ -value = 0.009).

**Table (4-7) Differences in the autism parenting stress, parental competence, autism spectrum quotient, and mindfulness between kinship to the child groups**

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Autism Parenting Stress	Equal variances assumed	.363	.547	-1.926	224	.055	-3.12943	1.62472	-6.33112	.07225
	Equal variances not assumed			-1.853	138.446	.066	-3.12943	1.68871	-6.46843	.20956
Parental Competence	Equal variances assumed	.043	.836	.496	224	.620	.77634	1.56556	-2.30877	3.86146
	Equal variances not assumed			.493	151.386	.623	.77634	1.57445	-2.33439	3.88708
Autism Spectrum Quotient	Equal variances assumed	.242	.623	-2.397	224	.017	-7.07923	2.95361	-12.89965	-1.25881
	Equal variances not assumed			-2.353	146.239	.020	-7.07923	3.00821	-13.02441	-1.13405
Mindfulness	Equal variances assumed	.159	.690	.715	224	.475	1.19646	1.67303	-2.10042	4.49335
	Equal variances not assumed			.712	151.644	.478	1.19646	1.68148	-2.12570	4.51862

*df: Degree of freedom; F: F-statistics; Sig.: Significance; Std. Error Difference: Standard Error Difference; t: T-statistics*

The study results display that there is a statistically significant difference in the autistic traits severity between kinship to the child groups (p-value = 0.020).

**Table (4-8) Differences in the autism parenting stress, parental competence, autism spectrum quotient, and mindfulness among family type groups**

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Autism Parenting Stress	Between Groups	512.832	2	256.416	1.906	.151
	Within Groups	30001.734	223	134.537		
	Total	30514.566	225			
Parental Competence	Between Groups	296.575	2	148.288	1.198	.304
	Within Groups	27605.288	223	123.791		
	Total	27901.863	225			
Autism Spectrum Quotient	Between Groups	1020.558	2	510.279	1.130	.325
	Within Groups	100726.220	223	451.687		
	Total	101746.779	225			
Mindfulness	Between Groups	427.478	2	213.739	1.514	.222
	Within Groups	31474.137	223	141.140		
	Total	31901.615	225			

*df: Degree of freedom; F: F-statistics; Sig.: Significance*

The study results reveal that there is no statistically significant difference in autism parenting stress, parental competence, autism spectrum quotient, and mindfulness among family type groups.

**Table (4-9) Differences in the autism parenting stress, parental competence, autism spectrum quotient, and mindfulness among family's socioeconomic class groups.**

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Autism Parenting Stress	Between Groups	1918.260	3	639.420	4.964	.002
	Within Groups	28596.307	222	128.812		
	Total	30514.566	225			

Parental Competence	Between Groups	2028.049	3	676.016	5.800	.001
	Within Groups	25873.814	222	116.549		
	Total	27901.863	225			
Autism Spectrum Quotient	Between Groups	1791.422	3	597.141	1.326	.267
	Within Groups	99955.357	222	450.249		
	Total	101746.779	225			
Mindfulness	Between Groups	833.594	3	277.865	1.986	.117
	Within Groups	31068.021	222	139.946		
	Total	31901.615	225			

*df: Degree of freedom; F: F-statistics; Sig.: Significance*

The study results reveal that there are statistically significant differences in the autism parenting stress and parental competence among family's socioeconomic class groups (p-value = .002, .001) respectively.

# **Chapter Five**

## **Discussion of the Study Findin**

## Chapter Five

### Discussion of the Study Findings

Despite the widespread recognition that raising a child is difficult in any case, parents of children with ASD face unique challenges, surprisingly little attention has been paid to the connections between parental stress, parental competence, parental mindfulness, and the severity of autistic traits; no such research has been conducted in Iraq. This research aimed to address this information gap by examining the potential mediating roles of autism trait severity, parental competence, as well as mindfulness, on the stress faced by parents of autistic children.

#### **5.1. Children's and Parents' sociodemographic characteristics**

The findings of the study results reveal that the children's age between 6 to 9 years, these findings of result t supported by Amireh, (2019) which mentioned that age was between 4-8 years, according to age on diagnosis the children were diagnosed early in age 1-2 years', this result is consistent with finding of Moh & Magiati (2012) and Xue et al., (2014). Whose mentioned that early diagnosis and treatment of autism spectrum disorder (ASD) in children may alleviate parental stress and safeguard the whole family's health. (Elder et al., 2017).

Most of children gender was male, these result resemble finding by Xue et al (2014), Amerah (2018), Di Renzo et al., (2021), Kalb et al., (2021), and Madarevic et al., (2022) were most of study participants were male children.

According to parents' features a relatively high percentage of fathers' age were 34 to 40 years and mothers' age were between 28 to 35 years, resemblance result of Hassina et al., (2020) in Algeria whose founded that parents age was between 30-40 years of most participants

and Madarevic et al., (2022) whose founded that the more parents age were between 20-40 years.

The highest percentage of participants were mothers, this the same finding of amireh (2018); Di Renzo et al., (2022) and Ketcheson et al., (2022), fathers and mothers' level of education was bachelor degree, family type was couples only, most of parents were semi-professionals occupation, they have 2-3 children of most participant and more of parents with upper middle class of socio-economic status.

## **5.2. Autism Parenting stress**

The majority of parents (62.8%) of children with ASD in this study also experienced high levels of stress. Stress in parenting and the role of gender according to the data, mothers of boys experience more stress than mothers of girls while caring for a child with autism ( $p$ -value = .001) when fathers of children with ASD were more stressed. Rivard et al., (2014) whose compared to parents reported much greater levels of stress, which may be related to fathers' increased involvement in child rearing in recent decades. However, fathers and mothers within the same family may experience similar stress levels. On the other hand, some studies found that mothers experience high level of parenting stress (Ang & Loh, 2019; Dabrowska & Pisula, 2010; Jones et al., 2013; Pisula et al., 2017; McStay et al., 2014; Tehee et al., 2009). Also some studies founded that no differences between fathers and mothers in parental stress (Nikmat et al., 2008; Davis & Carter, 2008; Hastings, 2003).

Parental stress was not significantly predicted by the age of the child, which may reflect the same weight of responsibility for children of all ages.

This result is consistent with the findings of (Peters et al., 2012; McStay et al., 2014; Amireh, 2019; Valicenti-McDermott et al., 2015).



Where there was no significant related of child's age and autism parenting stress.

Socioeconomic status was positively predicting parental autism stress ( $p$ -value = .001). The setting of the study was private center, in Holy Karbala city, there is no public autism center. The researcher suggest that reason make the financial burdens can most predict in parenting stress. A study by Mandell et al. (2005) disclosed the significant financial ramifications of caring for a child with autism. Families that have a member who has autism have significantly higher out-of-pocket expenses as compared to other families where a child has a developmental disability.

According to child age on diagnosis and autism parenting stress, there was no significant association at ( $p$ -value = .482) because the challenges and stressors associated with raising a child with autism may persist regardless of the age of the children when the diagnosis was made. Parents of children with autism often face ongoing demands related to their child's unique needs, communication difficulties, behavioral challenges, and accessing appropriate interventions and support services. These stressors may exist regardless of when the diagnosis was made.

Studies about child age on diagnosis and autism parenting stress are conflicting, while certain studies have presented contrasting results, various studies show that stress levels among families of children diagnosed with ASD are lower when the child is younger, this result agree with present studies (Rivard et al., 2014; Tehee et al., 2009), others have reported the opposite findings (Loundset al., 2007; Smithet al.,2008).

A number of children in a family has been found to have no significant association with autism parenting stress in the study at ( $p$ -value =.357). While the demands of raising multiple children can certainly add to the overall stress experienced by parents, specifically in relation to

autism parenting stress, the evidence suggests that the number of children itself does not play a major role.

The level of education of fathers and autism parenting stress, the study results reveal that there is a statistically significant difference between autism parenting stress and father's level of education among diploma parent's groups ( $p$ -value = .019).

To the very best of our understanding, single research effort (Rivard et al., 2014) demonstrated that women' levels of stress linked to parent-child interaction is predicted by their level of education (but not fathers') and by the length of time they wait for services. However, a few studies have discovered no differences between stress and maternal/parental education (Valicenti-McDermott et al., 2015; Nikmat et al., 2008).

### **5.3. Autism Parenting Stress and Parenting Mindfulness**

According to the findings indicated that more than half of parents are somewhat mindful in managing the autism spectrum their children have ( $n=122$ ; 54.0%) and autism parental stress is severe for most of parents ( $n=142$ ; 62.8%), Parental mindfulness was connected with lower stress levels, results reveal that all regression models display that the parental mindfulness negatively predicts parental autism stress ( $p$ -value = -0.024), Potentially helpful outcomes for parents of children with autism spectrum disorder are indicated by the results. This result is consistent with the findings of (Parent et al., 2016) whose revealed that substantial difference in parenting mindfulness based on parental education level, with those with a college degree displaying less negative parenting than those with a high school diploma or less,  $F [1, 613] = 10.67, p < 0.01$ .

According to mother's level of education, the study results reveal that there is a statistically significant difference in the mindfulness among mother's level of education bachelor degree groups ( $p$ -value = .009). Higher education can provide opportunities to build social networks and

connections, these networks may include other parents, professionals, or support groups who can offer guidance, validation, and emotional support, engaging with these networks can facilitate the development of mindfulness skills as mothers share experiences, learn from others, and gain perspectives on autism parenting. Mothers with high level of education have more parenting mindfulness and there is a statistically significant difference in the mindfulness between kinship to the child groups ( $p$ -value = .020) where is mothers' have high mindfulness more than fathers. This because most parents where mothers.

Previous studies found that mindfulness can decrease parenting stress by educational and interventional programs, for example, a study by Singh et al., (2021) conducted a controlled experiment on mothers participating in the MBPBS group reported considerably lower levels of felt stress in a randomized controlled experiment assessing the efficacy of mindfulness-based positive behavior support for lowering parenting stress ( $M = 25.47$ ; 95%), this result indicates that parents in the current study have no previous training or programs about parenting mindfulness so they are somewhat mindfulness and present with high level of stress about 62.8% from all participant were stressed and 54.0% somewhat mindful in managing the autism spectrum their children and 46.0 are not mindful.

Weitlauf et al., (2020) completed a controlled trial to compare the stress-relieving effects of the Early Intervention Denver Model with Mindfulness-Based Stress Reduction for Parents. Results from an applied and behavior analysis framework conducted over 12 weeks of intervention and 6 months of follow-up reveal that mindfulness helps enhance parenting and reduce stress., depression, and anxiety symptoms. While mindfulness practices can be a valuable tool for parents in managing stress and enhancing their overall well-being, addressing the specific challenges

associated with autism parenting requires a comprehensive and multi-faceted approach, this may involve unique challenges compared to parenting can lead to higher levels of parenting.

#### **5.4. Parental Stress and the Severity of Autistic Traits**

According to the findings of the research, every regression models display that the autistic traits severity positively predicts parental autism stress (p-value = .058) .

It is important to note that while the severity of autistic traits can predict higher levels of parenting stress, individual experiences may vary, children with more severe autistic traits often require more intensive caregiving and support (Madarevic et al., 2022).

This study's findings may provide credence to those of Efstratopoulou et al., (2022), who discovered causal links between ASD symptoms and the overall index of parental stress ( $p < 0.001$ ); differences in parental were ( $p < .01$ ). Porter et al., (2022) observed across nations, parental stress correlated less with autistic symptom severity than with child age; Poster et al., (2016) resulted in There was a statistically and clinically significant increase in parental stress in the ASD group compared to the control group. The degree to which the child's distractibility and hyperactivity caused parental stress was significantly correlated with the child's autism severity. Siu et al., (2019) show that symptoms on the autism spectrum are positively associated with parental stress, and this association is mediated through challenging child behaviors. However, some research has indicated that the intensity of autistic symptoms does not predict parental stress (Lin et al., 2021; Porter et al., 2022).

There were statistically significant differences in the autism spectrum quotient between gender groups ( $p$ -value =.048), Fathers most affected 80% of total samples. Researcher suggest traditional gender roles and societal expectations often place an emphasis on fathers as providers and protectors, when a child has severe autistic traits, fathers may face challenges in meeting these expectations, which can lead to feelings of stress and frustration. The inability to "fix" or "solve" their child's challenges may cause a sense of powerlessness and increased emotional burden.

### **5.5. Autism Parenting Stress and Parental Competence**

There were most of parent's competence (78.3%) about the role of parenting for children with ASD.

Studies conducted by whose found significant difficulties higher levels of parental competence, including parenting self-efficacy and perceived parenting skills, have been associated with lower levels of parenting stress and this finding agree with present studies (Fuentes-Biggi et al., 2018; Osborne et al., 2017). In contrast, study evidence demonstrates that parents of autistic children who report lower levels of parenting competence tend to experience higher levels of stress (Nguyen et al., 2016; Estes et al., 2013).

Cultural factors can influence parental competence and autism parenting stress. Studies have highlighted the importance of considering cultural beliefs, values, and norms in understanding parental competence and providing culturally sensitive support to families (Kalyanpur & Harry, 2012; Magaña et al., 2013).

Cultural differences between Iraqi people can decrease stress, and religion has a major effect on parenting wellbeing. Petts, (2011) Power and McKinney, (2013) found that the well-being of young children raised by married parents was greater if the mothers in the families had a

religious worldview. Parental religiosity was linked to optimistic parenting styles, which was linked to religious commitment among young adults.

The previous studies found parental competence can be a protective factor, economic limitations can still create challenges and stress in parenting a child with autism. Previous studies agree with current study result Trentacosta et al., (2018) and Pickard et al., (2016) found that Families with low economic status have high level of autism parenting stress.

Current study result agrees with previous some studies that founded that parental competence may be effective in addressing some challenges, but it may not fully alleviate stress in all situations or with every aspect of autism-related difficulties (Jones et al., 2005; Rais et al., 2009).

On other hand some previous studies found higher levels of parental competence, including parenting self-efficacy and perceived parenting skills, have been associated with decreased anxiety in parenting (Reed et al., 2017)

Current study also has high level of autistic traits severity, and low level of mindfulness which may be cause to increase parenting stress although parents completely competence.

# **Chapter Six**

## **Conclusions and Recommendations**

## **Chapter Six**

### **Conclusions and Recommendations**

#### **Conclusions**

The student researcher concluded the following:

1. The parents of child with ASD have high level of autism parenting stress, good parental competence and moderate parenting mindfulness. The Parenting Mindfulness, Parental Competence and autistic traits severity predict parental stress.
2. The Children with ASD have severe Autistic Traits severity that made Parenting stress in current study high. High level of Autistic traits severity and moderate Parenting Mindfulness predict and increase Autism Parenting Stress
3. The Socioeconomic status most predictable factor in autism parenting stress, parents with low socioeconomic status have high level of stress.

#### **Recommendations**

1. Further studies and intervention to engage parents in early intervention program such as Mindfulness-Based Stress Reduction (MBSR) that teaches mindfulness meditation and other techniques to help individuals manage stress and improve their well-being. Trait Mindfulness; Parent Behavioral Strategies (PBS) and Parental Self-Efficacy programs.
2. Parental Competence need more study to Examine with Autism Parenting Stress bidirectional relationship and to assess Parental Competence and Autistic Traits Severity by observation or video screening to more accurate result.
3. Educate parents and caregiver about interventional program for Applied behavior analysis (ABA) which is form of behavioral



therapy and more study for future researches to be provided free by schools and early intervention programs.

4. Provide social support and educate parents about coping strategies that can reduce stress and also community and media support to provide a public autism center in Holy Karbala city.

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# Appendices

## Appendix A Administrative Arrangement

Republic of Iraq Ministry of higher education & scientific research University of Karbala College of Nursing Graduate studies Division		جمهورية العراق وزارة التعليم العالي والبحث العلمي جامعة كربلاء كلية التمريض شعبة الدراسات العليا
التاريخ: 16 / 11 / 2022		العدد: 2651



الى / العتبة الحسينية المقدسة/المركز الطبي والنفسي للتوحد

م/ تسهيل مهمة

تحية طيبة...

يرجى التفضل بالموافقة على تسهيل مهمة طالبة الماجستير السيدة (رباب خليل ابراهيم مهدي) لإنجاز رسالتها الموسومة:

( The Mediating Roles of Autistic Traits Severity, Parental Competence, and Parents Mindfulness in Autism Parenting Stress)

(الدور الوسيط لشدة سمات طيف التوحد وكفاءة و يقظة الوالدين في الكذب النفسي للأبوة المتعلقة بالتوحد)

وهي إحدى طلبة الدراسات العليا / الماجستير في كليتنا / للعام الدراسي (2023-2022) .

... مع التقدير ...



أ.م.د. سلمان حسين فارس الكريطي  
 معاون العميد للشؤون العلمية و الدراسات العليا  
 2022 / 11 / 16



نسخة منه الى :-  
 - مكتب السيد معاون العلمي المختبر  
 - شعبة الدراسات العليا  
 - معهد نور المصطفى للبنات  
 - معهد نور المصطفى للبنين  
 - مركز الإمام الحسين (ع)  
 - أكاديمية السبعين لا امراض التوحد





العنوان : العراق - محافظة كربلاء المقدسة - حي الموظفين - جامعة كربلاء  
 Mail: nursing@uokerbala.edu.iq : websit nursing.uokerbala.edu.iq





## Appendix B Scientific Research Ethics Form

Ministry of Higher Education and Scientific Research  
University of Karbala / College of Nursing  
Scientific Research Ethics Committee

وزارة التعليم العالي والبحث العلمي  
جامعة كربلاء / كلية التمريض  
لجنة اخلاقيات البحث العلمي

استمارة اخلاقيات البحث العلمي

عنوان مشروع البحث  
**The Mediating Roles of Autistic Traits Severity, Parental Competence, and parents Mindfulness in Autism Parenting Stress**

الدور الوسيط لشدة سمات طيف التوحد، كفاءة و يقظة الوالدين في الكذب النفسي للأيوة المتعلق بالتوحد

بيانات عن الباحث الرئيسي

الاسم الثلاثي للطالب	مستوى الدراسة
رباب خليل ابراهيم	طالب دراسات عليا / ماجستير
اسم الأستاذ المشرف	بيانات الباحث او الباحثين المشتركين
أ.د. علي كريم خضير	اللقب العلمي أستاذ دكتور

**اهمية موضوع البحث واهدافه (Importance of the research and its objectives)**

Importance of the study: Children with autism spectrum disorder (ASD) develop a variety of deficits in communication and social interaction attached by restricted, stereotyped patterns of behavior, and concerns/activities, display little verbal and nonverbal communication. They can have limited capacity to interact with parents, may lack spontaneous enjoyment, express no moods or emotional affect, and may cannot engage in play. Developmental and adaptive abilities which are considered skills for living are impairment in person with ASD and can increase with growth to be present regardless of intellectual level. Parents of children with ASD experience greater levels of parenting stress as a result of parenting demands and child problem behavior. Such parents experience high levels of parenting stress than parents of typically developing children. Parenting stress is a result of parenting demands and child problem. So, parents raising these children face unique challenges in their roles. While many studies examine parenting stress, few little studies focused on parenting mindfulness and parental competence as the interaction between them make as buffer for parents against autism traits severity and parenting stress.

This study aims to identify if the autistic traits severity, parental competence, and mindfulness can mediate (predict) autism parenting stress among patients of children with ASD.

**وقت ومكان اجراء البحث (الاماكن المقترحة لاجراء البحث فيها)**  
وقت ومكان اجراء البحث: 2022/9/26 - 2023 /9/26 : مراكز رعاية التوحد التابعة للبعثات المقدسة في مدينة كربلاء المقدسة

**منهجية البحث (Methodology)**  
Descriptive predictive study

**عينة الدراسة Sample of the study**  
Probability random sample of 146 parents of children with ASD

**الاعتبارات الاخلاقية خلال اجراء البحث (Ethical consideration during research)**  
التعهد  
اني الموقع ادناه رباب خليل ابراهيم اتعهد بان اقوم باجراء البحث وفقا لما ذكر في البروتوكول اعلاه وان التزم باتباع القوانين والتعليمات فيما يخص اجراء البحوث والالتزام باخلاقياتها، كما واتعهد باخذ الموافقة من افراد العينة للمشاركة في الدراسة وان اقدم الإيضاحات والمعلومات الخاصة بالدراسة لأفراد العينة للمشاركة في حال طلبها. وان اتعامل بسرية تامة مع بيانات افراد العينة.

اسم وتوقيع الباحث  
رباب خليل ابراهيم

توصية لجنة اخلاقيات البحث العلمي في الكلية  
قرار اعضاء لجنة اخلاقيات البحث العلمي حسب جلستها المنعقدة بتاريخ 2022 /10/

الموافقة على اجراء البحث  عدم الموافقة على اجراء البحث

رئيس اللجنة  
عضو  
عضو  
عضو

## Appendix C Statistician Report

Republic of Iraq  
Ministry of higher education & scientific research  
University of Kerbala  
College of Nursing

جمهورية العراق  
وزارة التعليم العالي والبحث العلمي  
جامعة كربلاء  
كلية التمريض  
الدراسات العليا

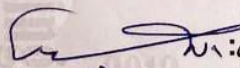
كلية التمريض  
جامعة كربلاء  
2027  
UNIVERSITY OF KERBALA

اقرار الخبير الاحصائي

اشهد بان الرسالة الموسومة :

The Mediating Roles of Autistic Traits Severity,  
Parental Competence and Parents Mindfulness on  
Autism Parenting Stress -

قد تم الاطلاع على الاسلوب الاحصائي المتبع في تحليل البيانات و اظهار النتائج  
الاحصائية وفق مضمون الدراسة ولأجله وقعت.

توقيع الخبير الاحصائي: 

الاسم واللقب العلمي: د. ايمن عبد الجبار محمد

الاختصاص الدقيق: احصائي

مكان العمل: جامعة كربلاء / كلية

التاريخ: 2023 / 6 / 5

## Appendix D

### Study Instrument- Arabic version

عزيزتي الأم .. عزيزي الأب ..

نلتمس مشاركتكم في هذا البحث الذي يهدف إلى التعرف على الكرب النفسي الناتج عن إصابة طفلكم باضطراب طيف التوحد والتعرف على دور كل من كفاءة ويقظة الوالدين وشدة سمات طيف التوحد في تحديد مستوى الكرب النفسي. نودّ إعلامكم بأنّ جميع البيانات المأخوذة من هذا البحث ستكون لأغراض البحث العلمي وستعامل بسريّة تامة من الباحثة.

اوافق علي المشاركة  لا اوافق على المشاركة

المعلومات الديموغرافية

عمر الطفل ..... سنة

جنس الطفل: ذكر ( ) أنثى ( )

كم كان عمر الطفل عند تشخيصه باضطراب طيف التوحد؟ ..... سنة

كم طفل لديك؟ .....

عمر الاب ..... عمر الام.....

صلتك بالطفل : والده ( ) والدته ( )

التحصيل الدراسي	للام	للاب
لا يقرأ ويكتب	( )	( )
يقرأ ويكتب	( )	( )
خريج الدراسة الابتدائية	( )	( )
خريج الدراسة المتوسطة	( )	( )
خريج الدراسة الإعدادية	( )	( )
دبلوم فني (خريج معهد)	( )	( )
بكالوريوس	( )	( )
دبلوم عالي	( )	( )
ماجستير	( )	( )
دكتوراة	( )	( )

نوع الأسرة:

الزوج الزوجة فقط ( ) الزوج والزوجة وأهل الزوج ( ) الزوج والزوجة والأقارب ( )

هل يوجد طفل اخر مصاب باضطراب طيف التوحد؟ نعم ( ) لا ( )

إذا كان الجواب نعم كم عدد الاطفال ؟

هل يعاني الطفل من اي امراض جسدية او عقلية/ اضطرابات مصاحبة؟ نعم ( ) لا ( )

هل تعمل في مجال الصحة النفسية والعقلية؟

هل تعاني من اي مشاكل نفسية ؟

الدخل الشهري للأسرة (بالدينار العراقي):

أقل من 300.000 ( )



- ( ) 600.000-300.000  
 ( ) 900.000-601.000  
 ( ) 1.200.000-901.000  
 ( ) 1.500.000-1.201.000  
 ( ) 1.501.000 أو أكثر  
 ما مدى قناعتك بالدخل الشهري؟

يكفي ( ) بالكاد يكفي ( ) لا يكفي ( )

### مهنة الام/الاب

مهني (وتشمل الأطباء، كبار الموظفين الإداريين، كبار المحاضرين، الأساتذة، المحامين، مدققي الحسابات، محرري الصحف، الموسيقيين الخبراء، المهندسين المعماريين، المدراء الإداريين للشركات الصناعية والتجارية).
شبه مهني (وتشمل الأشخاص من حملة الشهادة ما بعد المدرسة الثانوية أو التعليم الجامعي مثل المهندسين، المدرسين، الخ).
الكاسب، صاحب متجر، مُزارع، العمل ذو الطبيعة المتكررة. كاتب الطباعة، المحاسب، رجل المبيعات، صاحب مزرعة.
العامل الماهر: العمل المعقد يتطلب تدريباً مفراطاً مثل النجار، عامل البناء، ميكانيكي، سائق سيارة، وما إلى ذلك.
العامل شبه الماهر - العمل الذي يتطلب بعض التدريب كهربائي، عمال المصانع، مجلد الكتب، النادل.
العامل غير الماهر - العمل الذي لا يتطلب التعليم ولا التدريب مثل الحارس، المنظف، الحمال، الخ.
لا يعمل.

### مؤشر الكرب النفسي للأبوة المتعلق بالتوحد Autism Parenting Stress Index

يرجى قراءة كل فقرة بعناية والإجابة عن جميع الفقرات حسب المقياس الآتي (1 = غير مُسبب للكرب النفسي، 2 = أحياناً يُسبب الكرب النفسي، 3 = غالباً يُسبب الكرب النفسي، 4 = مُسبب للكرب النفسي للغاية بشكل يومي، 5 = مسبب للكرب النفسي للغاية لدرجة أننا نشعر أحياناً أننا لا نستطيع التعامل معها)



علماً أنه لا توجد إجابة صائبة أو أخرى خاطئة، وإنما أجابتك تعبر عن حالتك إزاء كل فقرة

الفقرة	غير مُسبب للكرب النفسي	أحياناً يُسبب الكرب النفسي	غالباً يُسبب الكرب النفسي	مُسبب للكرب النفسي بشكل يومي	مسبب للكرب بشكل مستمر
1. التطور الاجتماعي لطفلك					
2. قدرة طفلك على التواصل					
3. نوبات الغضب / الانهيارات					
4. السلوك العدواني (الأشياء والأقران)					
5. سلوك إيذاء النفس					
6. صعوبة في الانتقال من نشاط إلى آخر					
7. مشكلات النوم					
8. النظام الغذائي لطفلك					
9. مشكلات الأمعاء (الإسهال، الإمساك)					
10. التدريب على استخدام الحمام					
11. الشعور بعدم القرب من طفلك					
12. القلق بشأن مستقبل طفلك ما إذا كان مقبولاً من قبل الآخرين					
13. القلق بشأن مستقبل طفلك ما إذا كان يعيش بشكل مستقل (من دون الاعتماد على الآخرين)					

### The Autism Spectrum Quotient استبيان حاصل تقييم

#### طيف التوحد

يرجى قراءة كل فقرة بعناية والإجابة عن جميع الفقرات حسب المقياس الآتي (0 = موافق بالتأكيد ، 1 = موافق قليلاً ، 2 = غير موافق قليلاً ، 3 = غير موافق بالتأكيد) علماً أنه لا توجد إجابة صائبة أو أخرى خاطئة، وإنما أجابتك تعبر عن حالة طفلك إزاء كل فقرة.

الفقرة	موافق بالتأكيد	موافق قليلاً	غير موافق قليلاً	غير موافق بالتأكيد
1. يفضل أن يفعل الأشياء مع الآخرين بدلاً من أن يفعل ذلك بنفسه				
2. يفضل أن يفعل الأشياء بنفس الطريقة مراراً وتكراراً				
3. إذا يحاول أن يتصور شيئاً، فإنه يجد من السهل جداً تخيل صورة لذلك الشيء في ذهنه				

				4. غالباً ما ينغمس بشدة في شيء واحد حتى أنه يفقد رؤية أشياء أخرى
				5. كثيراً ما يلاحظ الأصوات البسيطة عندما لا يلاحظها الآخرون
				6. عادة ما تلاحظ / يلاحظ أرقام المنازل أو سلاسل معلومات مماثلة
				7. كثيراً ما يخبره الناس أن ما قاله غير مهذب، على الرغم من أنه يعتقد أنه كان مهذباً
				8. عندما يقرأ قصة ما، يمكن أن يتصور بسهولة ما قد تبدو عليه الشخصيات فيها
				9. يكون مفتون بالتواريخ
				10. في المجموعات الاجتماعية، يمكنه بسهولة تتبع العديد من محادثات الأشخاص المختلفين
				11. يجد المواقف الاجتماعية سهلة
				12. يميل إلى ملاحظة التفاصيل التي لا يراها الآخرون
				13. يفضل الذهاب إلى المكتبة بدلاً من الذهاب إلى الحفلات
				14. يؤلف القصص بسهولة
				15. ينجذب بقوة للناس أكثر مما ينجذب للأشياء
				16. يميل إلى أن تكون لديه اهتمامات قوية جداً، وينزعج إذا لم يتمكن من تحقيقها
				17. يستمتع بالأحاديث الاجتماعية
				18. عندما يتحدث، فإنه ليس من السهل للآخرين المشاركة في كلمة جانبية
				19. هو مفتون بالأرقام
				20. عندما يقرأ قصة، يجد صعوبة في فهم (استنباط) خصائص الشخصيات أو مشاعرها
				21. لا يستمتع بقراءة القصص الخيالية
				22. يجد صعوبة في تكوين صداقات جديدة
				23. انه يلاحظ انماط الاشياء في كل وقت
				24. يفضل الذهاب إلى الألعاب/مشاهدة الهاتف/التلفاز بدلاً من الأنشطة الذهنية المفيدة
				25. لا يزعه تغيير روتينه (برنامج) اليومي
				26. لا يعرف كيف يستمر في المحادثة مع أقرانه
				27. يجد سهولة في قراءة ما بين السطور (فهم مغزى الكلام المبطن) عندما يتحدث شخص ما معه

			28. عادة يقوم بالتركز بشكل أكبر على الصورة الكاملة، بدلاً من التفاصيل الصغيرة
			29. لا يكون جيداً في تذكر أرقام الهواتف
			30. لا يلاحظ عادة التغييرات الطفيفة في حالة ما أو مظهر شخص ما
			31. يعرف كيف يخبر الشخص الذي يستمع إليه في حال شعر بالملل
			32. يجد أنه من السهل التنقل بين الأنشطة المختلفة (القيام بأكثر من شيء في آن واحد)
			33. عندما يتحدث ، فإنه لا يكون متأكداً متى دوره في الكلام
			34. يستمتع بالقيام بالأشياء من تلقاء نفسه
			35. غالباً ما يكون آخر من يفهم مغزى النكتة
			36. من السهل عليه معرفة ما يفكر فيه شخص ما أو يشعر به بمجرد النظر إلى وجهه
			37. إذا كان هناك مقاطعة، فيمكنه العودة إلى ما كان يفعله بسرعة كبيرة
			38. إنه جيد في المحادثات الاجتماعية
			39. كثيراً ما يخبره الناس أنه يستمر في العمل على نفس الشيء
			40. عندما كان في مرحلة ما قبل المدرسة، كان يستمتع بممارسة الألعاب التي تتضمن التظاهر (التخيل) أنه مع أطفال آخرين
			41. يحب أن يجمع معلومات عن فئات الأشياء (على سبيل المثال، أنواع السيارات، أنواع الطيور، أنواع القطارات، أنواع النباتات، إلخ.)
			42. يجد صعوبة في تخيل ما سيكون عليه إذا كان يشبه شخصاً آخر
			43. يحب أن يخطط بعناية لأية أنشطة يشارك فيها
			44. يستمتع بالمناسبات الاجتماعية
			45. يجد صعوبة في تحديد نوايا الناس
			46. المواقف الجديدة تجعله قلقاً
			47. يستمتع بمقابلة أشخاص جدد
			48. جيد في الحرص على عدم إيذاء مشاعر الآخرين
			49. ليس جيداً في تذكر تواريخ ميلاد الأشخاص
			50. يجد أنه من السهل جداً اللعب مع الأطفال ألعاباً تتضمن التمثيل (التخيل)

## مقياس الكفاءة الوالدية

يستخدم لمقياس لتقييم كفاءة الوالدين يرجى يرجى قراءة كل فقرة بعناية والإجابة عن جميع الفقرات حسب المقياس الآتي (1 = قليلاً جداً ، 2 = قليلاً ، 3 = أحياناً ، 4 = كثيراً = 5 كثيراً جداً) علماً أنه لا توجد إجابة صائبة أو أخرى خاطئة، وإنما أجابتك تعبر عن حالة طفلك إزاء كل فقرة.

غير موافق بالتأكيد	موافق قليلاً	موافق قليلاً	موافق بالتأكيد	الفقرة
				1. يفضل أن يفعل الأشياء مع الآخرين بدلاً من أن يفعل ذلك بنفسه
				2. يفضل أن يفعل الأشياء بنفس الطريقة مراراً وتكراراً.
				3. إذا كان يحاول أن يتصور شيئاً فإنه يجد من السهل جداً تخيل صورة لذلك الشيء في ذهنه
				4. كثيراً ما ينهمك في شيء واحد ولا ينظر إلى الأشياء الأخرى
				5. كثيراً ما يلاحظ الأصوات البسيطة عندما لا يلاحظها الآخرون
				6. عادة يمكنه ملاحظة لوحة أرقام السيارات أو سلاسل مماثلة من المعلومات
				7. كثيراً ما يخبره الناس أن ما قاله غير مهذب، على الرغم من أنه يعتقد أنه كان مهذباً
				8. عندما يقرأ قصة ما، يمكن أن يتصور بسهولة ما قد تبدو عليه الشخصيات فيها.
				9. يكون مفتون بالتواريخ
				10. إذا كان في المجموعات الاجتماعية ، يمكنه بسهولة تتبع العديد من محادثات الأشخاص المختلفين
				11. يجد سهولة في التعامل مع المواقف الاجتماعية
				12. يميل إلى ملاحظة التفاصيل التي يغفل عنها الآخرون
				13. يفضل الذهاب إلى المكتبة بدلاً من الذهاب إلى الحفلات
				14. يسهل عليه تأليف القصص
				15. يجذب بقوة للناس أكثر مما يجذب للأشياء
				16. يميل إلى أن تكون لديه اهتمامات قوية جداً، وينزعج إذا لم يتمكن من متابعتها
				17. يستمتع بالأحاديث الاجتماعية
				18. عندما يتحدث ، فإنه ليس من السهل للآخرين المشاركة في كلمة جانبية
				19. يكون مفتوناً بالأرقام

				20. عندما يقرأ قصة ، يجد صعوبة في فهم(استنباط) خصائص الشخصيات أو مشاعرها
				21. لا يستمتع بقراءة القصص الخيالية
				22. يجد صعوبة في تكوين صداقات جديدة
				23.انه يلاحظ انماط الاشياء في كل وقت
				24.يفضل الذهاب إلى السينما بدلا من الذهاب الى المتاحف
				25.لا يزعجه تغيير روتينه (برنامج) اليومي
				26.لا يعرف كيف يستمر في المحادثة مع أقرانه
				27.يجد سهولة في فهم مغزى الكلام المبطن عندما يتحدث شخص ما معه
				28.عادة يقوم بالتركز بشكل أكبر على الصورة الكاملة ، بدلاً من التفاصيل الصغيرة
				29.لا يكون جيدا في تذكر أرقام الهواتف
				30.لا يلاحظ عادة التغييرات الطفيفة في حالة أو مظهر شخص ما
				31.يعرف كيف يخبر الشخص الذي يستمع إليه في حال شعر بالملل
				32.يجد أنه من السهل التنقل بين الأنشطة المختلفة (القيام بأكثر من شيء في ان واحد)
				33.عندما يتحدث على الهاتف ، فإنه لا يكون متأكدا متى دوره في الكلام
				34. يستمتع بان يقوم بفعل الأشياء من تلقاء
				35.غالبًا ما يكون آخر من يفهم مغزى النكتة.
				36. من السهل عليه معرفة ما يفكر فيه شخص ما أو يشعر به بمجرد النظر إلى وجهه
				37.إذا كان هناك مقاطعة ، فيمكنه العودة إلى ما كان يفعله بسرعة كبيرة
				38.إنه جيد في المحادثات الاجتماعية
				39.كثيرًا ما يخبره الناس أنه يستمر في العمل على نفس الشيء تقريبًا
				40.عندما كان في مرحلة ما قبل المدرسة ، كان يستمتع بممارسة الألعاب التي تتضمن التظاهر (التخيل) مع أطفال آخرين
				41.يحب أن يجمع الأشياء على شكل فئات (على سبيل المثال ، أنواع السيارات ، أنواع الطيور ، أنواع القطارات ، أنواع النباتات ، إلخ.)

				42. يجد صعوبة في تخيل ما سيكون عليه ليشبه شخصا اخر
				43. يحب أن يخطط بعناية لأية أنشطة يشارك فيها
				44. يستمتع بالمناسبات الاجتماعية
				45. يجد صعوبة في تحديد نوايا الناس
				46. المواقف الجديدة تجعله قلقا
				47. يستمتع بمقابلة أشخاص جدد
				48. جيد في الحرص على عدم إيذاء مشاعر الآخرين
				49. ليس جيدا في تذكر التواريخ مثلا ميلاد الأشخاص
				50. يجد أنه من السهل جدا اللعب مع الأطفال العابا تتضمن التمثيل (التخيل)

### مقياس اليقظة العقلية الوالدية

يرجى قراءة كل فقرة بعناية والإجابة عن جميع الفقرات للتفكير في الأبوة والأمومة والتفاعلات مع الطفل على مدار الأسبوعين الماضيين لتاريخ التقييم و حسب المقياس الآتي (1 = نادرا ، 2 = أحيانا ، 3 = كثيرا ، 4 = دائما) علماً أنه لا توجد إجابة صائبة أو أخرى خاطئة، وإنما أجابتك تعبر عن تفاعلك مع طفلك إزاء كل فقرة.

4	3	2	1	الفقرة
				1. هل تستمع بعناية وتصغي الى طفلك عندما تتحدثان
				2. هل عاودت انتباهك إلى طفلك عندما لاحظت أنك أصبحت مشتتاً
				3. هل يمكنك معرفة ما يفكر فيه طفلك ، حتى وان لم يخبرك به
				4. هل يمكنك معرفة شعور طفلك من خلال النظر إليه
				5. هل لاحظت تطور سلوك طفلك عندما يقوم بفعل معين
				6. هل توقعت بدقة مسبقاً كيف سيكون رد فعل طفلك تجاه موقف معين
				7. هل لاحظت تأثير عواطفك على طفلك
				8. هل شعرت بالانسجام مع مشاعر طفلك
				9. هل لاحظت الطريقة التي يستجيب بها طفلك لسلوكك
				10. هل فهمت الدوافع لسلوك طفلك
				11. هل فهمت لماذا يتصرف طفلك بطريقة دون غيرها
				12. هل تصرفت بروح الفكاهة والمرح مع طفلك
				13. هل تقبلت طفلك بما هو عليه
				14. هل تتوقع ان الطريقة التي تعامل بها طفلك ك ام/اب كانت متوافقة مع أفضل ممارسات الأبوة والأمومة
				15. هل شعرت ك ام /اب بالثقة في قدرتك على التعامل مع المواقف الصعبة

				16. هل كنت واع لمشاعرك قبل توبيخ طفلك
				17. هل كنت مراع لمشاعر طفلك قبل تأديبه
				18. هل كنت تلاحظ سلوكيات طفلك التي تزعجك
				19. هل انت قادر على تهدئة نفسك عندما يزعجك طفلك
				20. هل لاحظت أفكارك حول سلوك طفلك قبل التعامل معها
				21. هل سمحت لطفلك بمعرفة السلوكيات التي تزعجك
				22. هل أخذت وقتا للتفكير قبل معاقبة طفلك
				23. هل فكرت في تحسين مستقبل طفلك ، حتى وان كانت اشياء بسيطة
				24. هل سألت طفلك عن رأيه
				25. هل استغرقت وقتا للتفكير في تربيته
				26. هل فكرت في أسباب متعددة لسبب تصرف طفلك بالطريقة التي تصرف بها
				27. هل حاولت إبطاء ردود أفعالك من أجل تحقيق أهدافك بالتربية كوالد
				28. هل سمحت لطفلك بمعرفة سبب معاقبته

**Appendix E**

**Study Instrument- English version**

**Dear mother.. dear father..**

We seek your participation in this research, which aims to identify the psychological distress resulting from the injury of your child with autism spectrum disorder and to identify the role of each of the efficiency and vigilance of parents and the severity of autism spectrum traits in determining the level of psychological distress. We would like to inform you that all data taken from this research will be for scientific research purposes and will be treated with complete confidentiality from the researcher.

I agree to participate  I do not agree to participate

Demographic information

The age of the child is ..... one year

Child's gender: male ( ) female ( )

How old was the child when he was diagnosed with autism spectrum disorder? ..... year

how many children do you have .....

Father's age..... Mother's age.....

Your relationship with the child: his father ( ) his mother ( )

<b>Level of Education</b>	<b>Father</b>	<b>Mother</b>
Unable to read and write	( )	( )
Read and write	( )	( )
Elementary school	( )	( )
Middle school	( )	( )
High school	( )	( )
Diploma	( )	( )
Bachelor's degree	( )	( )
High diploma	( )	( )



Master’s degree	( )	( )
Doctoral degree	( )	( )

**Family type:**

Husband Wife only ( ) Husband, wife and husband's family ( ) Husband, wife and relatives ( )

Is there another child with autism spectrum disorder? Yes ( ) No ( )

If the answer is yes, how many children?

Does the child suffer from any physical or mental illnesses / associated disorders? Yes( ) No ( )

Do you work in the field of psychological and mental health?

Do you suffer from any psychological problems?

**Family Monthly Income (in Iraqi Dinars):**

<b>Less than 300,000</b>	( )	<b>300,000-600,000</b>	( )
<b>601,000-900,000</b>	( )	901,000-1,200,000	( )
<b>1,201,000-1,500,000</b>	( )	1,501,000 or more	( )

**How satisfied are you with your monthly income?**

enough ( ) hardly enough( ) not enough ( )

**Household’s Profession**

Professional (including doctors, senior administrative staff, senior lecturers, professors, lawyers, auditors, newspaper editors, expert musicians, architects, managing directors for industrial and commercial companies)
Semi-professional (include people with a degree after high school or university education such as engineers, teachers, etc.)
Writer, shopkeeper, farmer, work of a repetitive nature. Printer clerk, accountant, salesman, farm owner.
Skilled Worker: Complicated work that requires excessive training such as carpenter, construction worker, mechanic, car driver, etc.
semi-skilled worker - work that requires some training; electrician, factory worker, bookbinder, waiter.
Unskilled worker - work that does not require education or training such as guard, cleaner, porter, etc.

It doesn't work.

**Autism Parenting Stress Index**

Index of psychological distress of parenting related to autism

Please read each paragraph carefully and answer all paragraphs according to the following scale (1 = Not stressful, 2 = Sometimes creates stress, 3 = Often creates stress, 4 = Very stressful on a daily basis, 5 = So stressful sometimes we feel we can't cope

Note that there is no right or wrong answer, but rather your answer reflects your situation regarding each paragraph

	Not stressful	Sometimes creates stress	Often creates stress	Very stressful on a daily basis	So stressful sometimes we feel we can't cope
1. Your child's social development					
2. Your child's ability to communicate					
3. Tantrums/meltdowns					
4. Aggressive behavior (siblings, peers)					
5. Self-injurious behavior					
6. Difficulty making transitions from one activity to another					
7. Sleep problems					
8. Your child's diet					
9. Bowel problems (diarrhea, constipation)					
10. Potty training					
11. Not feeling close to your child					
12. Concern for the future of your child being accepted by others					
13. Concern for the future of your child living independently					

**Parental Competence Scale**

This scale can be used for assessing parental competence in parents of children with autism

	Little	Very Little	Some times	Much	Very Much
1- I have accepted my child's illness					
2-I am patient in dealing with my child.					
3-I am patient with the words and behaviors of my child.					
4-I try to get information about my child's illness and education from different people and resources.					
5- I can overcome my negative feelings and emotions.					
6- I'm ashamed of my child's illness.					
7- I feel relaxed as my partner and my relatives understand my circumstances.					
8- I have peace of mind with reliance to God and prayer					
9- I refer to the Autism Centers for children to provide better care to my child.					
10- I am looking for financial support to improve my living conditions.					
11- I am pleased with myself for sustaining education and care to my child.					
12- I am successful in my role as a mother/father.					
13- As a partner, I perform my duties well.					
14- I look at my own desires and interests.					
15- I have been able to improve my child's relationship with other family members.					
16- My family members help me in my child care and education.					
17- Love for my child increases my motivation to continue his/her education.					

18- Looking forward to my child's recovery, I continue his/her education.					
19- When my child learns something, I become more eager for her/his education.					
20- My beliefs motivate me to continue learning and caring for the child.					
21- I can take care of my child well and create the right behavior in him/her.					
22- I believe that I can improve my child's future.					
23- Under any circumstances, I feel responsible for pursuing my child's education.					

**The Autism Spectrum Quotient**

is used to a range of autistic traits.

	Definitely Disagree	Slightly Disagree	Slightly Agree	Definitely Agree
1. S/he prefers to do things with others rather than on her/his own				
2. S/he prefers to do things the same way over and over again				
3. If s/he tries to imagine something, s/he finds it very easy to create a picture in her/his mind				
4. S/he frequently gets so strongly absorbed in one thing that s/he loses sight of other things				
5. S/he often notices small sounds when others do not				
6. S/he usually notices house numbers or similar strings of information				
7. S/he has difficulty understanding rules for polite behavior				
8. When s/he is reading a story, s/he can easily imagine what the characters might look like				
9. S/he is fascinated by dates				
10. In a social group, s/he can easily keep track of several different people's conversations				
11. S/he finds social situations easy				
12. S/he tends to notice details that others do not				
13. S/he would rather go to a library than a birthday party or feelings				

14. S/he finds making up stories easy				
15. S/he is drawn more strongly to people than to things				
16. S/he tends to have very strong interests, which s/ he gets upset about if s/he cannot pursue				
17. S/he enjoys social chit-chat				
19. S/he is fascinated by numbers				
20. When s/he is reading a story, s/he finds it difficult to work out the characters' intentions or feelings				
21. S/he does not particularly enjoy fictional stories				
22. S/he finds it hard to make new friends				
24. S/he would rather go to the cinema than a museum				
25. It does not upset him/her if his/her daily routine is disturbed				
26. S/he does not know how to keep a conversation going with her/his peers				
27. S/he finds it easy to "read between the lines" when someone is talking to her/him				
28. S/he usually concentrates more on the whole picture, rather than the small details				
29. S/he is not very good at remembering phone numbers				
30. S/he does not usually notice small changes in a situation, or a person's appearance				
31. S/he knows how to tell if someone listening to him/her is getting bored				
32. S/he finds it easy to go back and forth between different activities				
33. When s/he talks on the phone, s/he is not sure when it is her/his turn to speak				
34. S/he enjoys doing things spontaneously				
35. S/he is often the last to understand the point of a joke.				
36. S/he finds it easy to work out what someone is thinking or feeling just by looking at their face				
37. If there is an interruption, s/he can switch back to what s/he was doing very quickly				
38. S/he is good at social chit-chat				
39. People often tell her/him that s/he keeps				

going on and on about the same thing				
40. When s/he was in preschool, s/he used to enjoy playing games involving pretending with other children				
41. S/he likes to collect information about categories of things (e.g., types of car, types of bird, types of train, types of plant, etc.)				
42. S/he finds it difficult to imagine what it would be like to be someone else				
43. S/he likes to plan any activities s/he participates in carefully				
44. S/he enjoys social occasions				
45. S/he finds it difficult to work out people's intentions				
46. New situations make him/her anxious				
47. S/he enjoys meeting new people				
48. S/he is good at taking care not to hurt other people's feelings				
49. S/he is not very good at remembering people's date of birth				
50. S/he finds it very to easy to play games with children that involve pretending				

**Mindfulness In Parenting Questionnaire (MIPQ)**

Please reflect on your parenting and interactions with your child over the last 2 weeks. Read each question carefully, and consider whether this item is true for you infrequently (1), sometimes (2), often (3), or almost always (4). Try your best to answer each question

	Almost always	Often	Sometime	Infrequently
1. Did you carefully listen and tune into your child when you two were talking				
2. Did you actively bring your attention back to your child when you noticed you had become distracted				
3. Could you tell what your child was thinking, even when they didn't tell you				
4. Could you tell how your child felt by				

looking at them				
5. Did you recognize when your child was up to something by their behavior				
6. Did you accurately predict in advance how your child would react to a situation				
7. Did you notice the way your emotions affected your child				
8. Did you feel in-tune^ with your child's feelings				
9. Did you notice the way that your child responded to your behavior				
10. Did you understand your child's motives for their behavior				
11. Did you understand why your child acted the way they did				
12. Did you have fun and act goofy with your child				
13. Did you accept your child exactly how he/she is				
14. Did you believe that the way you were parenting was consistent with best parenting practices				
15. Did you feel confident in your ability to handle difficult parenting situations				
16. Did you consider your feelings before disciplining your child				
17. Did you consider your child's feelings before disciplining your child				
18. Did you notice when your child's behavior was making you upset				
19. Were you able to calm yourself down when your child was making you upset				
20. Did you notice your thoughts about your child's behavior before reacting				

21. Did you let your child know when they were doing something that bothered you				
22. Did you take a moment to think before punishing your child				
23. Did you choose to do what was best for your child long-term, even when something different would have been easier				
24. Did you ask your child's opinion				
25. Did you take time to think about your parenting				
26. Did you consider multiple reasons for why your child behaved the way he/she did				
27. Did you try to slow down your reactions in order to accomplish your goals as a parent				
28. Did you let your child know why they were being punished				



## Appendix F

### قائمة لجنة خبراء تحكيم الأستبانة

ت	اسم الخبير	اللقب العلمي	مكان العمل	الأختصاص الدقيق	سنوات الخدمة
1	د. عبد المهدي عبد الرضا حسن	استاذ	جامعة بابل -كلية التمريض	فلسفة في التمريض - تمريض الصحة النفسية والعقلية	44 سنة
2	د. سجاد هاشم محمد	استاذ	جامعة بابل -كلية التمريض	فلسفة في التمريض - تمريض الصحة النفسية والعقلية	40 سنة
3	د. علي طارق عبد الحسن	استاذ	جامعة -كلية الطب كربلاء	دكتوراه امراض جلدية اتخصص دقيق في الامراض النفسية جلدية	22 سنة
4	د. صافي داخل	استاذ مساعد	جامعة كربلاء- كلية التمريض	تمريض الصحة النفسية والعقلية	20 سنة
5	د. حسام مطشر زان	استاذ مساعد	جامعه الكوفة -كلية التمريض	تمريض الصحة النفسية والعقلية	18 سنة
6	د. حيدر امير جبر	استاذ مساعد	جامعة القادسية- كلية التمريض	تمريض صحة المجتمع	16 سنة
7	د. رضا محمد الطائي	أستاذ مساعد	جامعة العميد- كلية التمريض	تمريض صحة المجتمع	9 سنوات
8	د. زكي صباح	مدرس دكتور	جامعة كربلاء- كلية التمريض	تمريض الاطفال	23 سنة
9	د. أمير صلاح الدين عبد الرزاق	مدرس	جامعة بابل-كلية التمريض	تمريض الصحة النفسية والعقلية	8 سنوات
10	د. هيثم ابراهيم فارس	مدرس	جامعة العميد -كلية التمريض	تمريض البالغين	7 سنوات
11	د. صالح علي	طبيب استشاري	وزارة الصحة- دائرة صحة كربلاء	اخصائي الطب النفسي	23 سنة

## المستخلص

رعاية طفل يعاني من اضطراب طيف التوحد قد تؤثر سلبًا على صحة الأبوين وسعادتهم. يعاني الأبوان، سواء الأمهات أو الآباء، من مستويات مرتفعة من التوتر في هذه الديناميكية. تم إجراء دراسة تصميم ارتباطي تنبؤي للتحقيق في الدور الوسيط لشدة سمات طيف التوحد وكفاءة الأبوة ووعي الأبوة في الكرب النفسي للأبوة للأطفال المصابين باضطراب طيف التوحد. تمت الدراسة في أكاديمية السبطين للتوحد واضطرابات النمو في مدينة كربلاء. شارك في البحث عينة عشوائية منتظمة تتألف من 226 من الآباء والأمهات لأطفال يعانون من التوحد في سن 2-12 عامًا. تم جمع أعمار المشاركين ومستويات تعليمهم ومستويات دخلهم باستخدام استبيان موحد بالإضافة إلى الأدوات التالية: مؤشر إجهاد الأبوة للأطفال المصابين بالتوحد، استبيان الوعي في الأبوة، كفاءة الأبوة واستبيان حاصل تقييم التوحد. تم جمع المعلومات من 20 نوفمبر 2022 إلى 25 فبراير 2023 بواسطة التقرير الذاتي.

تم تحليل البيانات باستخدام البرنامج الإحصائي لأبحاث العلوم الاجتماعية، على نظام التشغيل ويندوز. أظهرت نتائج الدراسة أن 62.8% من الآباء والأمهات للأطفال المصابين بالتوحد يعانون من إجهاد شديد، وأن أكثر من نصف الآباء والأمهات (54.0%) يتمتعون بمستوى من الوعي في التعامل مع أطفالهم المصابين بطيف التوحد الذي يعاني منه أطفالهم، وشدة سمات التوحد عند الأطفال كانت شديدة بنسبة 54% وأن معظم الآباء لديهم كفاءة (78.3%) في دورهم كأولياء أمور. يمكن للوعي في الأبوة وكفاءة الأبوة أن يتنبأ بشكل سلبي بالإجهاد الأبوي (قيمة  $p = -0.024$ ؛  $-0.092$ ) وبالتوالي

علاوة على ذلك، يمكن أن يتنبأ الوضع الاقتصادي وشدة سمات التوحد بإجهاد الأبوة فيما بينهما بشكل إيجابي (قيمة  $0.058$ ؛  $p=0.001$ ) وبالتوالي.

وبشكل واضح، حيث يعاني الآباء والأمهات ذو الحالة الاقتصادية المنخفضة من مستوى عالٍ من الإجهاد.

المزيد من البحوث فيما يتعلق بالبرامج التداخلية في اليقظة العقلية لأن التقييم الوصفي بدون المشاركة له تأثير أقل على الإجهاد، علاوة على ذلك، يتعين إضافة متغيرات ديموغرافية أخرى غير مشمولة في الدراسة.



جامعة كربلاء  
كلية التمريض

الادوار الوسيطة لشدة سمات التوحد وكفاءة و يقظة الوالدين في الكرب النفسي للأبوة  
المتعلق بالتوحد

رسالة تقدمت بها

رباب خليل ابراهيم

إلى كلية التمريض – جامعة كربلاء

كجزء من متطلبات نيل درجة الماجستير علوم في التمريض

إشراف

أ.د. علي كريم الجبوري

اب 2023 م

محرم 1444 هـ