



Arab American University

Faculty of Graduate Studies

**“Exploring mental health status and occupational balance among
Palestinian mothers of children with autism spectrum disorder (ASD):
A cross sectional study”**

By

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**This thesis was submitted in partial fulfillment of the requirements for
the Master`s degree in Occupational Therapy**

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Thesis Approval

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This thesis was defended successfully on 22/6/2024 and approved by:

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Declaration

I declare that the contents of the thesis are the result of my own effort and this thesis as a whole, or part of it, has not previously been submitted for a degree or research at any other educational or research institution.

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Abstract

Background: Caring for children with Autism Spectrum Disorder (ASD) imposes substantial demands on families, particularly on mothers who often serve as primary caregivers. The responsibilities associated with caregiving can lead to significant mental and physical strain. However, research exploring the mental health status and occupational balance of Palestinian mothers in this context is limited. This dearth of empirical investigation highlights a critical knowledge gap, hindering a comprehensive understanding of the unique challenges faced by this specific population.

Objectives: This study aimed to examine the levels of depression, anxiety, stress, and occupational balance among Palestinian mothers who had children with ASD. Additionally, the study sought to identify the factors associated with these mental health outcomes and occupational balance.

Methods: A cross-sectional study was conducted, involving a convenience sample of 94 Palestinian mothers residing in the northern region of Palestine. The Depression, Anxiety, and Stress Scale (DASS-21) and the Occupational Balance Questionnaire (OBQ-11) were used as the main outcome measures. Data analysis was performed using SPSS version 26.

Results: The findings revealed that approximately 31.9% of the mothers reported an extreme level of depression, while 39.4% reported an extreme level of anxiety. Furthermore, 60.6% of the mothers reported experiencing occupational imbalance. Various factors associated with these mental health outcomes and occupational balance were identified as sociodemographic as mother age, social status, work status, mothers' educational level, in addition to resilience, coping and illness perception.

Conclusion: The study highlights the alarming rates of depression and anxiety among Palestinian mothers caring for children ASD, along with a significant proportion experiencing occupational imbalance. Sociodemographic factors and psychological variables, such as resilience, coping, and illness perception, were identified as associated factors. Urgent attention is needed to prioritize the mental well-being and occupational balance of these mothers. Targeted interventions should address identified factors to promote better mental health and occupational outcomes. The findings have implications beyond the Palestinian context, emphasizing the need for global research and interventions to support mothers in similar circumstances.

Keywords: *mental health; occupational balance; mothers; ASD*

Table of Contents

Thesis Approval.....	I
Declaration	II
Acknowledgement	III
Abstract.....	V
List of Tables.....	X
List of Figures.....	XII
List of Abbreviations	XIII
Chapter 1 Introduction and background.....	1
1.1 Chapter overview	1
1.2 Background and rationale	1
1.3 Research Problem.....	5
1.4 Research Objectives	7
1.5 Research Significance	7
Chapter 2 Literature Review.....	9
2.1 Chapter overview	9
2.2 A historical overview of ASD.....	9
2.3 ASD prevalence	10
2.4 Causes of ASD	11
2.5 Onset and Diagnosis of ASD	11
2.6 Living experience with ASD in Palestine and Arab world.....	13
2.7 Parenting challenges with children with ASD	15
2.8 Mental Health and OB for Mothers of Children with ASD.....	17
2.9 Occupational therapy role in mental health and OB	23
2.10 Summary.....	25
Chapter 3 Methodology.....	33

3.1	Chapter overview	33
3.2	Ethical consideration	33
3.3	Study design.....	34
3.4	Study setting.....	34
3.5	Study population	35
3.6	Sampling method and sample size	35
3.7	Participant recruitment procedure	36
3.8	Data collection instruments	37
3.9	The sociodemographic questionnaire	37
3.9.1	Depression, anxiety, and stress scale DASS-21	38
3.9.2	Occupational Balance Questionnaire (OBQ-11).....	38
3.9.3	Brief Resilience Scale (BRS)	39
3.9.4	The Brief-COPE Scale.....	40
3.9.5	The Brief Illness Perception Questionnaire (IPQ).....	41
3.9.6	Data collection procedure	42
3.10	Data analysis	44
Chapter 4	Results	45
4.1	Recruitment.....	45
4.2	Data completeness and normality	45
4.3	Sociodemographic characteristics	46
4.3.1	Sociodemographic data for the family of ASD children	46
4.3.2	Children with ASD characteristics	46
4.4	Descriptive statistics for the outcome measures	49
4.4.1	Depression, Anxiety and Stress.....	49
4.4.2	Occupational balance.....	51
4.4.3	Resilience	54
4.4.4	Coping.....	55
4.4.5	Illness perception.....	56

4.5	Factor associated with mental health status and occupational balance	57
4.5.1	Factor associated with mental health status	57
4.5.2	Factor associated with occupational balance	63
4.5.3	The association between DASS-21 and OB-11	65
Chapter 5	Discussion and Conclusion.....	67
5.1	Discussion.....	67
5.2	Mental health status and Occupational balance	67
5.3	Factor associated to mental health	68
5.4	Factors associated to occupational balance	72
5.5	The association between DASS-21 and OBQ-11	75
5.6	Conclusion	76
5.7	Limitations	78
5.8	Future Research Recommendations and occupational therapy implication	78
References	.....	80
Appendices	.....	94
Appendix A	Prisma.....	94
Appendix B	IBB approval.....	95
Appendix C	Facilitating a research mission.....	96
Appendix D	Outcome measures	97
المخلص	.....	109

List of Tables

Table 1 The main reviewed studies according to the factors related to mental health and occupational balance	27
Table 2 Time table for data collection, analysis and write research paper	43
Table 3 Description analysis for sociodemographic characteristics	47
Table 4 Descriptive statistics study outcome measures	50
Table 5 Mean and SD for items of the OBQ-11	52
Table 6 Percentage of the item's responses for OBQ-11	54
Table 7 Mann-Whitney test (U-test) for the difference in the DASS subscale between working and not working mothers	57
Table 8 A Kruskal-Wallis H test association DASS subscale scores by mothers' educational level and social status	58
Table 9 Spearman's rho Correlation between the DASS-21 and mother age, number of siblings, resiliance, adaptive coping and maladaptive coping using Spearman's rank correlation coefficients. Data are presented as correlation coefficient (p value).	61
Table 10 Mann-Whitney test (U-test) for the difference in the OB between working and not working mothers.	63
Table 11 A Kruskal-Wallis H test association occupational balance by mothers' educational level and social status	64

Table 12 Spearman's rho Correlation between the OB and mother age, number of siblings, resiliance, adaptive coping and maladaptive coping using Spearman's rank correlation coefficients. Data are presented as correlation coefficient (p value)65

Table 13 Spearman's rho Correlation between DASS-21 and OBQ-11 using Spearman's rank. Data are Presented as correlation coefficient (p value).....66

List of Figures

Figure 1 Percentages of the depression, anxiety and stress level for all participants.	49
Figure 2 The mean of each item in OBQ-11 for all participants.	53
Figure 3 Percentages of the resilience level for all the participants.	55

List of Abbreviations

Full name	Abbreviation
Autism Spectrum Disorder	ASD
Occupational Balance Questionnaire	OBQ
Depression, anxiety, stress scale	DASS
Brief Resilience Scale	BRS
Brief COPE Scale	BCS
Illness Perception Questionnaire	IPQ

Chapter 1 Introduction and background

1.1 Chapter overview

This chapter provides an overview of the challenges faced by families of children with Autism Spectrum Disorder (ASD), including the mental health issues and occupational balance problems experienced by mothers in this context. It highlights the significance of occupational therapy as a potential intervention for these mothers. The research question, research problem, objectives, and significance are subsequently presented.

1.2 Background and rationale

The prevalence of ASD is on the rise globally, with one in 100 children affected (WHO, 2023). This increasing prevalence has led to chronic stress and strain within families. Parents of children with ASD commonly experience psychological suffering, high levels of stress, mental fatigue, and a lack of adequate coping mechanisms (Bozkurt et al., 2019). The intense burden of caring for children with ASD directly impacts the caregivers' own quality of life (Ezzat et al., 2017). In addition, these families struggle with interactions with others, engagement, and leisure., which affect their psychological health and life balance (Picardi et al., 2018).

Mothers of children with ASD face distinctive challenges and assume significant responsibilities that can profoundly impact their mental health. Mental health, as defined by Galderisi et al. (2015), refers to an individual's ability to effectively manage challenging

emotions and maintain optimal personal functioning. For these mothers, navigating the demands of caregiving for children with ASD while juggling the needs of their other children can be particularly taxing (Hoefman et al., 2014). The intricate nature of these responsibilities often leaves them with limited opportunities to reduce or delegate their caregiving duties (Nicholas et al., 2016). Consequently, their mental well-being may be compromised, leading to heightened levels of stress, and an increased vulnerability to symptoms of depression and anxiety (Lai et al., 2015). It is imperative to acknowledge and address the specific challenges that mothers of children with ASD encounter in managing their mental health. By providing targeted support and tailored resources, we can promote their overall well-being and foster positive mental health outcomes in this population.

This population families of children with ASD struggle with leisure, work, and social connections in addition to stress, anxiety, and depression also rise in these families, which affects their psychological health and life balance (Picardi et al., 2018). Furthermore, Klanker and his colleagues defined mental health in 2013 the capacity to modify a strategy of action in the face of unexpected challenges or impediments, modify one's personal thoughts in view of emerging facts, and adapt to changes that different life situations (Klanker et al., 2013). Good psychological health is described as a state of well-being that helps people to deal with daily challenges and perform efficiently in various domains such as mental health literacy, attitude toward mental disorders, self-perceptions and values, cognitive skills, education, occupational performance, emotions, behaviors, self-management strategies, social competence, and household and relationships, physical wellbeing, reproductive health ,life meaning and life quality (Fusar-Poli et al., 2020).

Moreover, the reviewed studies had shown different factors effect on mental health for mothers of children with ASD and the significance of subjective satisfaction and occupational status in influencing mental health (Shu & Lung, 2005). Numerous studies have either concentrated on social help or discovered that coping mechanisms can control stress levels. (Zablotsky et al., 2013). On the other hand, the unemployment, single motherhood status, lowest monthly family income and pre-existing disease all shown a substantial mental health association (Rousou et al., 2016). Financial difficulties, social stigma, and community disapproval were also associated with stress and caregiving burden (Papadopoulos, 2021).

Whereas young mothers and individuals who had fewer economic experienced higher levels of mental distress and serious depression signs and their perceptions about the disorder's impact and duration were important independent determinants of their mental distress and depression symptoms (Gatzoyia et al., 2014). One source of tension for several parents is a lack of opportunities for pleasant or relaxed activities. Often, the potential of having a child with ASD prevents parents from taking a break. (Altiere et al., 2009).

Interventional strategies including behavior therapy, individual sessions, and group therapy are used to improve parental coping skills it has a good influence on the mental health of families with ASD children (Iida et al., 2018). However, the level of satisfaction about rehabilitation services that develop child skills effect of level of mental health for the mothers (Lee & Chiang, 2018). Following that, the quality of rehabilitation provided to autistic children in relation to maternal mental health (Selvakumar & Panicker, 2020).

However, a few studies in the Arab world focus on the psychological status for the families with child with ASD (Alallawi et al., 2020). The severity of sadness, anxiety, and stress was highlighted in families with children with ASD as a result of variables related to someone's character (Ansari et al., 2021) and most mothers of children with ASD initially have trouble acquiring accurate diagnosis and feeling rejected by extended family members and not receiving appropriate support from them (Lamba et al., 2022).

While in 2020, Ritz and Scaffa clarify that mental health promotion in occupational therapy can be traced back to the profession's origins and the introduction of moral treatment (Reitz & Scaffa, 2020). However, occupational therapists who deal with these ASD children and their mothers should evaluate the mothers' occupational routines and assist in developing harmony in caregivers' daily activities to enhance their health, life quality, and general wellbeing (Wagman et al., 2015). Occupational therapists underline the balance between mental health and occupational performance enhance mental health and well-being, which they consider part of rehabilitation (Ikiugu et al., 2017). To bring about positive change, individuals should also attempt to lower the obstacles to receiving mental health care and seek guidance from mental health professionals. (Gilson et al., 2021).

The findings suggest that improved life satisfaction and successful performance are important components in helping individuals who are depressed or anxious achieve occupational balance in addition to the importance of occupational therapy for individuals suffering from depression and anxiety, and the necessity for medical practitioners to attend to concerns regarding occupational balancing and fulfillment. In addition, the time

constraints that women who care for child with ASD, as well as the high proportion of difficulties with mental health that these moms face and emphasize the necessity of assisting parents in management their times (Sawyer et al., 2010), occupational therapists' field of expertise and practice is to train other practitioners and policymakers about the significant gains of occupational balance and to urge services that support it (Hodgetts et al., 2014).

Lastly, previous literature has not examined all factors related to the mental health and occupational balance of mothers of children with ASD, objective and subjective factors effect on mental health for these mothers. Hence, enhance occupational balance and mental health for these mothers in parallel with the therapy plan for their children could be enhanced psychological status and time management to promote and enhance these mothers' quality of life, assisting policymakers and service providers in overcoming the obstacles parents face and improving the assistance network; ultimately, this could help children with ASD realize their full capabilities and assist parents who might be raising a child with ASD in accepting the disorder and its consequences (Mu'tasem et al., 2020).

1.3 Research Problem

Previous literature has predominantly focused on the mental health of mothers raising children with ASD, with limited attention given to the concept of occupational balance. Additionally, studies exploring the specific factors related to mental health and occupational balance among Palestinian mothers of children with ASD are scarce .The existing literature has provided some insights into the mental health challenges faced by

mothers of children with ASD, but there is a lack of research specifically examining this population within the Palestinian context. Similarly, the concept of occupational balance and its influence on the well-being of Palestinian mothers in the context of raising children with ASD has received limited research attention.

Furthermore, previous studies have primarily focused on variables such as maternal age and employment status, while factors such as the perception of the ASD condition and coping have not been thoroughly explored. This highlights the need for further research to investigate the influence of these overlooked factors on the mental health and occupational balance experiences of Palestinian mothers of children with ASD.

Given the unique sociocultural and contextual factors, the Palestinian health situation is concerning, with health disparities exacerbated by the region's poorer economic status, limiting access to healthcare and increasing environmental exposures. The strain of living under Israeli occupation adds to these challenges (Rosenthal, 2021). That Palestinian mothers may encounter, conducting research specifically tailored to this population is essential. By gaining a better understanding of the mental health challenges and occupational balance experiences of Palestinian mothers, researchers and practitioners can develop targeted interventions and support systems that are culturally sensitive and address the specific needs of this population. Exploring factors associated with mental health and occupational balance that are amenable to intervention is crucial for providing evidence-based strategies to enhance the well-being of Palestinian mothers raising children with ASD. Such research will contribute to the development of comprehensive interventions that

consider both mental health and occupational balance, ultimately improving the overall quality of life for these mothers and their families.

The research problem is framed by two primary questions:

- 1) What are the levels of depression, anxiety, stress, and occupational balance among Palestinian mothers of children with ASD?
- 2) What factors are associated with the mental health outcomes and occupational balance of Palestinian mothers who have children with ASD?

1.4 Research Objectives

The objective of this study was twofold: firstly, to assess the levels of depression, anxiety, stress, and occupational balance experienced by Palestinian mothers raising children diagnosed with Autism Spectrum Disorder (ASD), and secondly, to identify the factors that are associated with these mental health outcomes and occupational balance.

1.5 Research Significance

Recent research has highlighted the impact of having a child with ASD on the mental health and occupational balance of mothers. However, there is a dearth of studies specifically focusing on Palestinian mothers in this regard. Therefore, the findings of the present study hold significant implication in shedding light on the mental health and occupational challenges faced by Palestinian mothers raising children with ASD.

The insights gained from this research can provide valuable knowledge regarding the specific mental health and occupational issues encountered by Palestinian mothers in the context of ASD caregiving. This understanding can inform the development of targeted support programs and interventions by healthcare professionals, aimed at enhancing the overall well-being of these women and their families. By tailoring interventions to the unique needs of Palestinian mothers, these programs can effectively address the psychological challenges they face and promote their mental health.

Furthermore, the study's findings can contribute to the broader understanding of how ASD affects families in the Palestinian context. By exploring the factors associated with mental health outcomes and occupational balance, the research can provide a nuanced understanding of the complex dynamics that influence the well-being of Palestinian mothers and their families. This knowledge can guide the development of comprehensive interventions and services that cater to the specific needs of families affected by ASD in the region.

In summary, the research holds significance as it contributes to the understanding of mental health and occupational challenges faced by Palestinian mothers raising children with ASD. The findings can inform the development of tailored interventions and support programs, promote the well-being of women and their families, and enhance the broader comprehension of the impact of ASD on families in the Palestinian context.

Chapter 2 Literature Review

2.1 Chapter overview

This chapter presents a comprehensive literature review on ASD, covering various aspects including the historical background, causes, diagnostic criteria, onset, and prevalence. It specifically explores the unique challenges associated with ASD in Palestine and the Arab world. The literature review also focuses on the factors related to the mental health and occupational balance of mothers raising children with ASD. Additionally, it examines the potential role of occupational therapy in supporting the mental well-being and occupational balance of these mothers.

2.2 A historical overview of ASD

The word "autism" comes from the Greek word *autos*, meaning "self." This name was given because autistic children typically have a self-catered attitude, acting as though they are special individuals with abilities that they possess in their own world making them seem separate from other people (Ramachandran & Oberman, 2007). The psychiatrist Eugen Bleuler developed the term "autism" to characterize a sign among the most severe forms of schizophrenia. According to Bleuler, autistic thought is characterized by infantile desires to escape unpleasant facts and replace them with delusions and hallucinations (Bleuler, 1958).

Following that, Freud coined the term "autism" to describe the tendency of people with schizophrenia to withdraw into their personal worlds and isolate themselves from actual

environments (McGlashan, 2011). In addition, autism spectrum disorders (ASD) are a category that is increasingly being utilized to represent conditions that were previously classified as pervasive developmental delays in the International Classification of Diseases 10 (ICD-10) and The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), and are now classified as autism spectrum disorders (ASD) in the DSM-5. ASD would encompass previous categorized illnesses such as autistic disorder, Asperger's, childhood disintegrative disorders, and pervasive neurodevelopmental disorders. ASD would have to be apparent from infancy or early childhood, even though the time of life requirements for diagnosis would not be included in the current DSM-5. ASD is a neurological disorder characterized by difficulties in social interaction as well as confined or recurrent and maladaptive behaviors (American Psychiatric Association & Association, 2013).

2.3 ASD prevalence

The frequency of ASD has risen dramatically in the world, in 2020, WHO statistics estimated that one in 160 children has ASD globally (WHO, 2020) and in 2023 about one in 100 children suffers from ASD (WHO, 2023). However, the prevalence and incidence of ASD in Palestine are currently unavailable from the Palestinian Central Bureau of Statistics, which showed that 2.4% of children in the age group of 2 to 17 years have at least one handicap (PBOS, 2020). In a similar cultural context to Palestine, Jordan encounters comparable obstacles in obtaining accurate statistics on the prevalence of ASD. Due to the social stigma associated with ASD, families in Jordan often conceal their children from society out of a sense of embarrassment. This cultural phenomenon

contributes to the underreporting of ASD prevalence in Jordan, much like in Palestine (Nazzal et al., 2018).

2.4 Causes of ASD

Despite having a number of early indicators and risk variables, researchers currently lack a comprehensive explanation with one or more developmental trajectories for the signs of ASDs. Moreover, a few ASDs are detectable earlier, particularly when accompanied by a delay in language milestones and intellectual disability. Additionally, many ASD instances combine biological and contextual (e.g., perinatal) factors, while others do not, and the interactions between environment and genes can differ even among individuals with the same ASD diagnosis. While it is straightforward that such direct causal factors influence brain development, organization, and function in a way that leads to the ASD phenotype, researchers have yet to identify prodromal brain markers that reliably predict the later onset of full-blown disorder, and the extent to which any of these markers will be specific to autism, as compared to a variety of other neurodevelopmental outcomes (Yirmiya et al., 2010). Evidence indicates that the ASD is a neurobiological condition that is impacted by environmental and genetic variables that have an impact on the growing brain (Hodges et al., 2020).

2.5 Onset and Diagnosis of ASD

The onset of symptoms in Autism Spectrum Disorder (ASD) often occurs at an early age, and diagnosis typically takes place during the preschool years. ASD encompasses a wide range of potential symptoms and varying levels of severity. Each child with ASD

possesses a unique set of strengths and weaknesses that impact their occupational performance and their family's experience in distinct ways (APA, 2013). It is worth noting that males are more likely to be diagnosed with ASD, while there is a tendency to overlook or underdiagnose girls who meet the diagnostic criteria. Girls with ASD may be misdiagnosed, diagnosed later in life, or remain undiagnosed altogether. This is partly due to the fact that girls are less likely to exhibit noticeable outward indicators of ASD and may also be more adept at concealing their social difficulties (Volkmar et al., 2014).

The diagnosis of autism spectrum disorder (ASD) is based on the presence of restricted and repetitive patterns of behavior, interests, and activities, as well as difficulties in social interaction. It is essential that the current presentation of symptoms significantly impacts the individual's functioning. However, diagnosis can also consider historical information, as symptoms may change over time and can be masked by adaptive mechanisms. The diagnostic criteria for ASD include various specifications, such as the presence or absence of intellectual impairment, structural language impairment, or association with other medical or genetic conditions. Additionally, specifiers related to the age at which concerns first arose, the presence or absence of regression in previously acquired skills, and the severity of symptoms are used to provide a more detailed clinical description and individualize the diagnosis. With the updated criteria, many individuals who were previously diagnosed with Asperger's disorder would now be diagnosed with ASD, even if they do not have intellectual or language difficulties (American Psychiatric Association, 2013).

ASD is characterized by a range of indicators that differ in their characteristics and impact on functioning among children. The onset of ASD symptoms typically occurs during early childhood, typically between 12 and 24 months of age (Brignell et al., 2018; Ozonoff et al., 2008). One of the initial signs often reported by families is delayed speech development, reflecting challenges in social and communicative development within the first year of life (De Giacomo & Fombonne, 1998). However, these early variations are not sufficiently specific to differentiate between developmental delays and ASD. They encompass various domains, including sleep patterns, eating habits, and behavioral and emotional styles (Werner et al., 2005). As children progress through the second year of life, clearer distinctions and more consistent identification of ASD indicators emerge (Palomo et al., 2006). Therefore, caution should be exercised in interpreting early signs, and comprehensive evaluation is necessary for accurate diagnosis and appropriate intervention.

2.6 Living experience with ASD in Palestine and Arab world

ASDs in Palestine have gained more attention due to increased media coverage and research. However, children with ASD in the West Bank face shortages of assistance and the system fails them at every stage of the treatment cycle. Furthermore, Dababnah and his colleagues conducted a qualitative research study, semi-structured interviews with 24 Palestinian parents for children with ASD up to the age of 18, the findings revealed that participants encountered challenges organizing evaluations for ASD, including difficulties finding qualified specialists and facing spatial barriers such as checkpoints and

transportation issues. Additionally, the cost of ASD-related services was consistently identified as a barrier to accessing care. Furthermore, participants highlighted the lack of readily available health, educational, and supportive services for children with ASD in the West Bank (Dababnah et al., 2015).

On the other hand, the experiences of parents raising autistic children on the West Bank families lacked comprehensive understanding regarding ASDs, yet most noticed a deficit in the kids' behavior at an early age, negative attitudes within the family and the larger community caused a great deal of stress, shame, and guilt for the parents. (Dababnah et al., 2013).

Regarding to the nearby country a study conducted in Jordan with a convenience sample of 184 parents of children with ASD, there were no significant variations in the physical, psychological, social, and environmental health of fathers and mothers of autistic children (Dardas & Ahmad, 2014) . Additionally, the bivariate correlations between the parents' reported QoL levels and their parenting stress, coping mechanisms, and demographic traits were nearly the same for both parents and this study emphasized quality of life (QoL) of Arab parents of autistic children varies according on their stress levels, coping mechanisms, demographics, and, to some extent, cultural background (Dardas & Ahmad, 2014).Furthermore in Jordan the parents showed a moderate level of satisfaction with the services and its quality they received, parents indicated that programs related to community awareness, family counseling, and early intervention were necessary (Al Jabery et al., 2014).

2.7 Parenting challenges with children with ASD

Considering an ASD child needs more care and attention from their parents, raising a child with this condition can be challenging. Parents with children with ASD may also struggle to obtain work, socialize, and participate in leisure activities. In addition, caregivers may experience elevated levels of stress, anxiety, and depression, potentially leading to detrimental effects on their mental health and occupational balance (Picardi et al., 2018). The mental health of parents must come first because untreated stress and anxiety can negatively impact the whole family (Bones et al., 2019). Thus, it is essential to offer caregivers assistance and psychological therapies (Agbaria & Work, 2020).

In terms of mental health a state of well-being that helps people to deal with daily challenges and perform efficiently, good mental health including: mental health literacy, attitude toward mental disorders, self-perceptions and values, cognitive skills, education, occupational performance, emotions, behaviors, self-management strategies, social competence, and household and relationships, physical wellbeing, reproductive health, life meaning and life quality (Fusar-Poli et al., 2020). Moreover, the capacity to modify a strategy of action in the face of unexpected challenges or impediments, modify one's personal thoughts in view of emerging facts, and adapt to changes that different life situations may necessitate is referred to as flexibility (Klanker et al., 2013). However, mental health promotion in occupational therapy can be traced back to the profession's origins and the introduction of moral treatment (Reitz & Scaffa, 2020).

It is crucial to highlight those researches on the occupational balance of mothers of children with ASD are limited. Despite this, evidence indicated that there is a relationship between mental health and occupational balance. Subsequently, occupational balance was connected with a high quality of life, high satisfaction with daily functioning, and a low level of unhappiness. Meanwhile, improved life satisfaction and achievement in daily tasks are important factors in achieving occupational balance in clients with mental health problems (Wagman et al., 2021).

In terms of occupational balance, occupational balance is a fundamental notion in occupational science that can be traced back to the earliest pioneers of occupational therapy as a career Meyer. Plus, Occupational balance is a core principle in occupational research that dates back to the early 1900s. Meyer's rationale was based on "moral treatment" principles, established a century ago to improve health in institutional settings by imitating the framework of normal life with various tasks that formed a balanced mix (Kielhofner, 2009).

Additionally Occupational balance concepts expanded throughout the world in the second half of the nineteenth century (Hulter A. Sberg, 2010). Moreover, occupational balance is a key topic in occupational therapy. It is defined as a equilibrium of participation in occupation that leads to well-being. For example, the harmony might be between physically, psychological, and societal professions, either between choice and required tasks, demanding and relaxing occupations, or doing and being (Wilcock, 2006).

Subsequently, the person's perspective of being in the appropriate range of occupations and having the right variance across activities can be termed "occupational balance," which is in regard to occupational areas, occupations with various levels of responsibility qualities, as well as time use (Wagman et al., 2012). Whereby individual should be capable of balancing even when under tough conditions; experiencing a child (ASD) disrupts homelife balance and may reduce the mom's engagement in daily routines (Bar et al., 2016).

2.8 Mental Health and OB for Mothers of Children with ASD

To identify relevant literature, a systematic search was conducted using the CINAHL, MEDLINE, and PubMed databases. The search terms used were "autism spectrum disorder," "occupational balance," "mental health," and "mothers." Relevant MESH terms were also utilized. The search was limited to articles published in English between 2013 and 2023. An updated search was performed in January 2024. Further details of the search process can be found in Appendix A.

Table 1 The reviewed studies according to the factors related to mental health and occupational balance

Caregivers of children with ASD may experience significant effects on their mental health and occupational balance as a result of elevated stress, anxiety, and depression (Picardi et al., 2018). Since untreated stress and anxiety can negatively impact the entire family, parents' mental health is extremely important (Bones et al., 2019). It is consequently essential to provide psychological therapy and support to caregivers (Agbaria & Work,

2020). Furthermore, families face a variety of difficulties, these difficulties can be successfully handled with proper assistance and direction (Mala et al., 2018).

Previous publications addressed the variables associated with mothers of children with ASD and their occupational balance, as well as the state of their mental health and occupational balance. There was a high correlation between the primary symptoms of ASD and symptoms of depression in mothers, according to a study done in China that involved 180 mothers of children with ASD indicated that socioeconomic status was a significant risk factor linked to greater maternal mental health, including signs of depression and excessive anxiety (Zhou et al., 2019).

A study conducted in the United States involved 46 parents of young children with ASD concerns. The study revealed that these parents experience higher levels of stress during their children's early development. Furthermore, as their children mature, these parents may encounter additional challenges that could have a negative impact on their mental health. These challenges involve social satisfaction, psychological well-being, parenting effectiveness, and the social communication behaviors of their children (DesChamps et al., 2020).

However a group of seventy mothers with children took part in an online survey. The results indicated that mothers of children with ASD exhibited more signs of mental health issues compared to mothers of children with DYS and no special educational needs diagnosis. The study also revealed a significant correlation between maternal mental health and socioeconomic status (SES), child diagnosis, gender, as well as behavioral and emotional issues in the child, the survey encompassed 32 children without special

educational needs, 22 children with an ASD diagnosis, and 16 children with a dyslexia (DYS) diagnosis, understanding maternal resilience and practical coping are crucial for maintaining maternal mental health and mothers of children with ASD face higher rates of mental health issues, with behavioral issues, socioeconomic status, child diagnosis, and other factors contributing to reduced mental well-being (Nahar et al., 2022).

Younger parents and those with less financial stability reported higher levels of psychological discomfort and severity of depression symptoms. The cross-sectional study, which included 111 parents of children with ASD, also revealed that parents' perceptions of the disorder's consequences and prolonged were strong, independent predictors of their psychological discomfort and intensity of depressive symptoms. Specifically, 34.2% of parents had clinically significant depressive symptoms, and an alarming 55% had clinically significant levels of psychological discomfort (Gatzoyia et al., 2014).

Another cross-sectional study conducted in Saudi Arabia involved 131 parents of children with ASD focused on demographics, parenting life satisfaction, family stress and coping strategies, and perceived social support. The results revealed a correlation between life satisfaction and parental and family stress perception levels. Interestingly, this association was weaker when social support acted as a mediator. Furthermore, the study found that the relationship between life satisfaction and family stress was mediated by social support. This relationship was significant at low and average levels of stress but not at high levels, suggesting the essential role of social support from family members in minimizing the impact of tension (Khusaifan & El Keshky, 2021).

Moreover, the study aimed to investigate the factors influencing the relationship between the broad autism phenotype and depression symptoms in mothers of children with ASD. The research found that a greater presence of broad autism phenotype interpersonal defects was correlated with lower levels of relationship fulfillment, leading to an increase in depressive symptoms. Additionally, it suggested a direct link between depressive symptoms and behavioral problems in children, highlighting the significant impact of raising children with ASD on mothers. The study also identified the mother's age and personal characteristics as potential risk factors (Pruitt et al., 2018).

Moreover, a longitudinal study conducted in the United States examined 188 families with children diagnosed with ASD to better understand the relationship between parental stress and child functioning. The study found significant differences in fathers' and mothers' reports of parental stress. It also highlighted both parent-driven and child-driven effects on externalizing behavior problems and ASD symptoms. According to the study's findings, family therapies for children with ASD should consider the serious impact of elevated psychological distress on the children's behavioral issues (Rodriguez et al., 2019). In a study involving 731 parents of children with ASD and 554 parents of typically developing children, it was discovered that parenting stress was correlated with symptoms of Autism Spectrum Disorder (ASD). However, this relationship was found to be influenced by the child's problematic behaviors. Interestingly, parents of children with ASD reported experiencing less stress related to social competency and school involvement. The study also suggested that the intensity of ASD symptoms or diagnosis awareness did not always lead to parenting stress (Siu et al., 2019).

Moreover, a study conducted a survey on thirty mothers of children with ASD were assessed using the Depression, Anxiety and Stress Scale (DASS 21), the WHO Quality of Life Scale (WHOQOL-BREF), and the COPE Inventory resulted in that the quality of life of the mothers was low, and they showed signs of anxiety and depression and the mothers had effective coping mechanisms, some mothers had severe anxiety, and most had high levels of depression symptoms and the mothers used active coping, positive reframing, acceptance, planning, and religious coping as their main coping strategies. Therefore, it suggested that an important to address the coping mechanisms and psychological discomfort of mothers as part of a comprehensive intervention for children with ASD (Selvakumar & Panicker, 2020).

Regarding to awareness and education, well-informed parents are better equipped to handle their own stress and their child's behavior. Furthermore, accurate identification and easy access to assistance can lead to more positive outcomes for the child (Bonis, 2016). However, a study involving 69 mothers showed mild symptoms of anxiety, despair, and internalized stigma. The study found significant positive correlations between the perception of internalized stigma and depressive and anxious symptoms. It also discovered a strong positive correlation between the symptoms of depression and anxiety and the mothers' level of education and their perception of ASD. Finally, there was a significant positive correlation between the presence of anxiety and depressive symptoms and the experience of internalized stigma, anxiety, and depressive symptoms (Öz et al., 2020). In cross sectional research aimed to identify the variables associated with stress in moms of children with ASD and recruited Eighty in Yogyakarta, resulted in mothers' stress levels

are significantly correlated with social support and mental health issues and mothers' parenting stress is impacted by mental health issues and the social assistance they receive by 11.7%. Mothers' stress is mostly caused by their social support system, suggesting that parenting stress is influenced by mental health issues and social support for mothers of children with autism spectrum disorders and the mothers who receive more social support, the less stress (Hartini et al., 2021).

A cohort sequential design on a sample of 113 mothers of children with ASD showed that whereas greater use of cognitive reframing was associated with better maternal outcomes, greater use of disengagement and distraction was linked over time to higher maternal maladjustment (the effects of engagement on adjustment measures were not consistently found to be positive), the results showed that the effects of child behaviour on maternal adjustment were occasionally reduced by the application of various coping methods (Benson & disorders, 2014).

A recent study employed a mixed-methods approach to explore the impact of professional services on the activities of mothers raising children with ASD. In-depth interviews were conducted with nineteen mothers to gain insights into their experiences with various services and how these services influenced their work, leisure activities, and access to support. Additionally, a survey involving 139 mothers was completed. The study revealed that due to time constraints, many mothers had to sacrifice paid employment, social activities, rest, and sleep to prioritize child care. They often had to reduce their own leisure time to accommodate the demands of child care, and interruptions in services significantly affected their ability to engage in work and leisure activities (Hodgetts et al., 2014).

2.9 Occupational therapy role in mental health and OB

Occupational therapy is concerned with achieving occupational balance, which refers to a person's perception of having the right variety of occupations within the appropriate range and with the right degree of responsibility and time use (Wagman et al., 2012). Even in challenging circumstances, individuals should be able to maintain this balance. For example, a mother with a child with autism spectrum disorder (ASD) may experience disruptions to her daily routines, which can lead to an imbalance in her occupational life (Bar et al., 2016). Subsequently, individuals who experience a lower quality of life, decreased functional ability, heightened levels of anxiety and depression, and dissatisfaction with their performance tend to rate their occupational balance lower. On the other hand, people who have a higher quality of life, greater levels of satisfaction generally have better occupational balance hence, these findings indicate that helping individual with mental health concerns increase their level of life satisfaction and efficiently complete everyday tasks could significantly aid in achieving occupational balance (Wagman et al., 2021).

Additionally, evidence indicated that mothers face difficulty to manage their time well when they have a child with ASD these moms are more likely to lead unbalanced lives. Therefore, to enhance moms' occupational engagement and life happiness, occupational therapists must collaborate with them to overlook their own needs and guidance on how to allocate their time effectively based on their life circumstances, hence management habits lead to enhance mothers' mental well-being by reducing stress levels(Behnia et al., 2017),in addition to that occupational therapists should evaluate mothers' occupational

patterns and help them achieve balance in their daily activities to improve their health, life quality, and general wellness (Wagman et al., 2015). Furthermore, studies mention that occupational therapists could identified the policymakers about the significant gains of occupational balance and to urge services that support it (Hodgetts et al., 2014). Additionally, promoting greater occupational balance can improve subjective health and enjoyment of life, it was recommended to conduct more research into designing an intervention program based on occupational balance is required to demonstrate the practicality of the therapy and its influence on the health and lifestyle (Park et al., 2021).

A generally low rating of occupational balance was found among people with mental issues; however, Hence, improved life satisfaction promotes mental health reflect enhancement for occupational balance (Wagman et al., 2021). By helping mothers of children with ASD participate in more activities and manage their time better, occupational therapy can enhance their quality of life (Eklund et al., 2017).

Subsequently, to improve parents' quality of life, therapies ought to concentrate on controlling the manifestations of the disorder and putting in place psychoeducational and supportive programs for them as soon as possible following receiving the diagnosis (Papadopoulos et al., 2023). Helping families and kids deal with despair, therapists can also help with expectations, overcoming developmentally barriers, releasing the kids from being the ones carrying the symptoms, and creating new, happier family (Goepfert et al., 2015).

2.10 Summary

It was discovered that the scope of these studies are constrained after a thorough evaluation of the extent of research on the level of mental health and occupational balance in addition to factors influencing mothers of children with ASD mental health and occupational balance. It is worth noting that no studies have been conducted on this topic in Palestine.

Through previous studies, it was clarified that mothers of children with ASD suffer from a level of difficulties in their psychological state for many reasons, and this generally affects the occupational balance. The factors mentioned in previous studies, including sociodemographic factors such as age, gender, marital status, number of siblings, level of education, economic status were considered. Moreover, the severity of autism, functional abilities which was affected the mental health of the families. On the other hand, personal character and cultural values, coping, functioning, and building a healthy routine make a difference in mental health .Hence, enhancing occupational balance during a regular time management program for mothers and increasing awareness towards mental health services must be enhanced and encouraged to reduce negative attitudes towards mental health and encourage mothers to access mental health services, in addition to building a time management program, maintaining occupational balance, and enhancing their quality of life.

As studies have shown, occupational therapy is effective in improving mental health by raising awareness of the nature of the perception of illness in addition to enhancing coping

strategies and resilience, Furthermore, it achieves occupational balance by balancing different activities, related to daily life activities, which in turn promote mental health in general for these mothers who have children with ASD, to better understand the difficulties these moms, face and to give them the help they require, this topic has to be addressed and explored extensively and provide more attention to variables that are under control and may be adjusted.

Table 1: The main reviewed studies according to the factors related to mental health and occupational balance

Reference	Country	Study design	Participants	Outcome measures	Main results
(Gatzoyia et al., 2014)	Greek	Cross sectional	111 parents of ASD	<ul style="list-style-type: none"> ▪ Depressive symptoms (PHQ-9) ▪ Illness perceptions (B-IPQ) ▪ General psychological distress (GHQ-28) 	Psychological discomfort and the severity of signs of depression were higher in younger parents and those with less money. Parents thought the illness would be persistent and felt that it affected their life
(Siu et al., 2019)	Hong Kong	Cross sectional	731 parents of 177 children with ASD and 554 typically developing children	<ul style="list-style-type: none"> ▪ The Childhood Autism Spectrum Test (CAST), ▪ The Strengths and Difficulties Questionnaire (SDQ), ▪ Parenting Stress Index-Short Form (PSI-SF). 	Parenting stress and symptoms of the autistic spectrum were positively correlated, but the association was moderated by problematic behaviors in the kids. Results imply that parenting stress was not primarily caused by the severity of symptoms associated with autism spectrum disorders or by awareness of the diagnosis of ASD.
(Zhou et al., 2019)	China	Cross sectional	180 mothers of children with ASD	<ul style="list-style-type: none"> ▪ Generalized Anxiety Disorder Scale (GAD-7) and the 9-item 	Mothers of children with ASD showed signs of depression and

				<ul style="list-style-type: none"> ▪ Patient Health (PHQ-9) Questionnaire. ▪ Autism Behavior Checklist (ABC) Social Responsiveness Scale (SRS) 	excessive anxiety. It was shown that there was a high correlation between the primary symptoms of autism in children and symptoms of depression in mothers.
(Öz et al., 2020).	Turkey	Cross sectional	69 patients	<ul style="list-style-type: none"> ▪ Scale (BDS) ▪ Beck Anxiety Scale (BAS) ▪ Internalized Stigma of Mental Illness (ISMI) Scale and ▪ Autism Quality of Life Questionnaire - Parent Version (AQoLQPV) ▪ Beck Depression 	Mothers with children with a particular illness displayed mild signs of hopelessness, anxiety, and internalized stigma. the mothers of the patients scored poorly on quality of life and life satisfaction. They found a significant positive connection between the existence of anxiety and depressive symptoms and the experience of internalized stigma. Anxiety and depressive symptoms were also found to be strongly positively correlated. Moreover, there was a substantial negative

					correlation between the mother's quality of life, sense of challenges specific to autism, life satisfaction score, and the perception of internalized stigma, anxiety, and depressive symptoms.
(Hartini et al., 2021)	Yogyakarta	Cross sectional	80 mothers of children with ASD	<ul style="list-style-type: none"> ▪ Parenting Stress Index (PSI) ▪ Multidimensional Scale of Perceived Social Support ▪ General Health Questionnaire (GHQ-12) 	Mothers' stress levels are significantly correlated with social support ($r = -3.41$, $p = 0.002$) and mental health issues ($r = 0.288$, $p = 0.01$). Mothers' parenting stress is impacted by mental health issues and the social assistance they receive by 11.7%. The primary factor contributing to moms' stress is their social support system.
(Khusaifan & El Keshky, 2021)	Kingdom of Saudi Arabia (KSA)	Cross sectional	131 parents	<ul style="list-style-type: none"> ▪ Survey: demographic information, parenting life satisfaction, family stress and coping, and perceived social support 	Life satisfaction levels were correlated with reported stress from parents and family, and that this link was mediated by social support by about 0.19 points ($\beta =$

					<p>–0.19, 95% CI [–0.34, –0.05], $p = .02$). The connection between family stress and life satisfaction was shown to be significant at low ($p = .002$) and average ($p = .017$) levels of stress, but not at high stress, and was moderated by social support.</p>
(Wagman et al., 2021)	Sewed	Cross sectional	One hundred and eighteen participants	<ul style="list-style-type: none"> ▪ Hospital Anxiety and Depression Scale(HAD) ▪ OBQ ▪ COPM, ▪ Manchester - Short Assessment of Quality of Life (MANSA) 	<p>A generally low rating of occupational balance was found; however, the scores differed depending on the participants' degree of anxiety and depression, their quality of life, their occupational performance and satisfaction with their occupational performance. Logistic regression analyses revealed that high quality of life, high satisfaction with occupational performance and low level of depression was</p>

					associated to occupational balance
(Nahar et al., 2022)	UK	Cross sectional	70 Mothers children with ASD 22 children were diagnosed with ASD, 16 children were diagnosed with Dyslexia (DYS) and 32 children had no special educational needs diagnosis	<ul style="list-style-type: none"> ▪ Child behavioral and emotional problem ▪ General Health Questionnaire (GHQ-12) ▪ The Brief Resilience Coping Scale ▪ The Short Support Functions Scale ▪ Coping Questionnaire, ▪ The Life Orientation Test-Revised ▪ The Family Assessment Device (FAD) 	Mothers of children with autism spectrum disorder (ASD) face higher maternal mental health issues, with socioeconomic status, child diagnosis, gender, and behavioral issues contributing to reduced mental health

Chapter 3 Methodology

3.1 Chapter overview

This chapter presents a detailed description of the methodology employed in the research study. It comprises several sections, including ethical considerations, study design, study setting, study population, sampling method and sample size, participant recruitment procedures, data collection instrument, and data analysis.

3.2 Ethical consideration

The study commenced after receiving ethical approval from the Institutional Review Board (IRB) (Appendix A) at an Arab American University-Palestine(AAUP). The researcher ensured that the research did not violate any of the IRB's ethical guidelines. content designed before initiating the study with understandable language for the study population. Facilitating Form from the AAUP was obtained to facilitate participant recruitment from the centers in Palestine (Appendix B). Any participation was voluntary, with free withdrawal at any time. Following a thorough explanation of the study to potential participants, they signed a consent form approving their participation in the study and were given a written participant information sheet (PIS). The written consent form contains the study purpose in addition to the researcher's details, and was given to participants to read and discuss before signing if their participation was approved. The personal information detailed is on an ID given to the participants instead of the name and the data was saved on a password-protected computer accessed only by the researcher.

This research not cause any health-related harm because it was an evaluation process with no treatment.

3.3 Study design

This study followed a quantitative research methodology and a cross-sectional design. A cross-sectional study is a type of observational study that determines the prevalence of categories among participants. Descriptive or analytical data may be obtained; however, the data is gathered at a certain point in time and is unable to be utilized to show the cause of something. Moreover, cross-sectional studies have the advantages of being quick, simple, and inexpensive to conduct (Kesmodel, 2018).

3.4 Study setting

The study took place in rehabilitation centers and schools for children with special needs in the northern region of Palestine in Jenin, Nablus and Tulkarem, the system of procedures for a researcher's entry into the northern centers due to these regions are less complicated and easier than others areas. In addition, it is close to the researcher's work and residence, which gives a chance to apply any intervention based on what is summarized in the results so that the research is more realistic for the geographical area.

Mothers were recruited from Jenin: The Pediatric Rehabilitation Center (AAUP), the Hope Maker Center, ALamal School for Special Needs, Zainab Academy, Al Iradeh Center in Arrabeh, Al Iradeh Center in Seelat Alharthya, and Alwaleed Rehabilitation Center, from Nablus Palestinian Children Institute, Al Najah University, Basmet Amal

Center, and the Tukaram Wojood Center for Autism. The centers' staff identified potential participants who met the inclusion criteria. Mothers of children with ASD who have met the eligibility criteria and consented to take part in the study.

3.5 Study population

A sample of 94 Palestinian mothers who have children with ASD, who consented to participate and provided written, informed consent, were selected from the general rehabilitation centers in Palestine in the areas of Jenin, Nablus, and Tulkarem.

Inclusion/Exclusion: Participants are eligible to participate if the following conditions are met: 1) being a Palestinian mothers who have a child diagnosed with ASD, 2) Mothers between their twenties and fifties, 3) living in Palestine .4) who can read and understand the Arabic language. The exclusion criteria:

- Mothers who have a history of diagnosed mental illness.

3.6 Sampling method and sample size

This study aimed to recruit a convenience sample of mothers who have children with ASD from rehabilitation centers in Palestine. Convenience samples are non-probability samples. It is easy to acquire and might be easily accessible and the convenience sample might not be homogeneous because it was not meant to be representative or random. In addition, the sample data's description could be unstable because it could be greatly influenced by other circumstances (Lunneborg, 2007).

Sample size: The standard deviations of the DASS 21 among mothers have been reported to be ± 24.5 , (Malkawi et al., 2021). Therefore, the sample size was calculated, and it revealed that a sample size of 93 participants is sufficient for being able to estimate the mean score with a 95% confidence interval. 94 Palestinian mothers were recruited to the study.

3.7 Participant recruitment procedure

Participants were recruited from 10 rehabilitation centers in the northern region of Palestine. The center's staff identified potential participants who meet the inclusion criteria. After receiving ethical approval, the researcher started communicating with the therapist by phone, who agreed to assist and cooperate in collecting data. The researcher provided the therapist with detailed information about the study's aims, process, and inclusion and exclusion criteria. Time was taken by the researcher to educate the study team about the study and answer follow-up questions from the therapist. The participants who met the inclusion criteria were given the research booklet, which included the invitation letter, participant information sheet, consent form, and measurement tool. These documents were written in Arabic to accommodate the Palestinian mother's culture. The participant's information sheet was given to the participant before data collection; information was included in the invitation letter, and details about the study were given. If the participant agreed to participate in the study, the researcher obtained formal written consent to begin data collection for the recruited participants.

3.8 Data collection instruments

There were six research instruments used for data collection in this study. Two of these were standardized assessment tools and major tools in the study, including the Depression Anxiety Stress Scale (DASS-21) and the Occupational Balance Questionnaire 11 (OBQ-11). and the other three standardized instruments to assess personal factors: the Brief Resilience Scale (BRS), the Brief COPE Scale (BCS), and the illness perception questionnaire (IPQ). In addition to the sociodemographic questionnaire. (Appendix D)

3.9 The sociodemographic questionnaire

The sociodemographic questionnaire includes the following sections: 1) child information, 2) mother information; The child information part contains questions on age, gender, years of diagnosis, whether or not a child is integrated into school, and whether or not they receive rehabilitation services. The mother's information section includes questions about the mother's and father's ages, family income, the mother's and father's levels of education, social status (living together, divorced, mother widow status), work status, the number of siblings, and the type of residency.

3.9.1 Depression, anxiety, and stress scale DASS-21

Depression, anxiety, and stress scale DASS-21 is a quantitative measure to assess mental health symptoms such as stress, anxiety, and depression using a subscale. The standard cut-off scores for depression, anxiety, and stress on the DASS-21 are nine, seven, and fourteen, respectively. Scores are categorized as normal, mild, moderate, severe, and extremely severe (Gomez, 2016). In addition, multiply acquired DASS21 scale scores by two to compare with normative and other published DASS data (Gomez & networks, 2016). Is Arabic-validated and has demonstrated high validity, reliability, and internal consistency. Cronbach alphas ranged between 0.78 and 0.91 for its three subscales (Almhdawi et al., 2018). Coefficients of reproducibility and scalability (CR and CS) A CR above 0.90 with a CS above 0.60 indicates acceptable scalability (Ali et al., 2017), and the ICCs ranged from 0.75 to 0.86 (Al-Shannaq, et al., 2021).

3.9.2 Occupational Balance Questionnaire (OBQ-11)

Occupational Balance Questionnaire-11 (OBQ-11): is a self-report questionnaire can assess the occupational balance in relation to their current circumstances and daily life. The questionnaire utilizes 11 statements to examine how well different types of activities are balanced, including how much time is spent on each activity and how satisfied respondents are with how much time is spent on each activity. It is graded on a 4-point answer system (ranging from 0 to 3) based on how strongly each statement is agreed with. Between "strongly disagree" (equal to 0) and "strongly agree" are the possible responses (equivalent to 3). As a result, a final score that varies from 0 to 33 can be obtained, with a

higher value denoting a higher OBQ (Håkansson et al., 2020). In addition OBQ has adequate test-retest reliability (Spearman's Rho for the total score was 0.926) and good internal consistency (Cronbach's alpha 0.936), and as a result, appears stable over time (Wagman & Håkansson, 2014).

For the Arabic version: "A high level of agreement was found on the content of OBQ11-A from the occupational therapists. Cognitive debriefing interviews indicated that OBQ11-A was easy to understand. Cronbach's alpha for the total OBQ11-A score was 0.864, indicating good internal consistency. Exploratory factor analysis showed acceptable factor loadings for all items. The total scores showed positive statistically significant associations with Family Quality of Life Scores ($r = 0.561$, $p < 0.001$) (N Dhas et al., 2022).

3.9.3 Brief Resilience Scale (BRS)

The BRS was developed to assess the recover from stress is a reliable way to evaluate resilience, and it may offer specific and vital information about how individuals manage stressors that are related to their health, contain the six components of short resilience scale (BRS). Positive language is used in items 1, 3, and 5, while unfavorable language is used in items 2, 4, and 6. The BRS is evaluated by finding the mean of the six items and reverse coding items 2, 4, and 6 (Bizri et al., 2022), in addition that score 3 suggesting a normal resiliency level (Smith et al. 2013). The BRS's Cronbach's alphas were 0.836, 0.902, 0.877, 0.798, 0.754, and 0.702 (Smith et al., 2013). For Arabic version the BRS has

been cross-culturally validated, and the Arabic BRS measure displayed respectable internal consistency (Cronbach's alpha =.78) (Younes et al., 2018).

3.9.4 The Brief-COPE Scale

A Brief-COPE Scale was created to assess the effectiveness of coping strategies for stressful life events. A broad definition of coping is an attempt made to lessen the distress brought on by unpleasant life experiences. In assessing how patients are reacting to a serious diagnosis, the scale is frequently used in healthcare environments. It can be used to evaluate a person's capacity to deal with a variety of challenges, such as a cancer diagnosis, heart failure, wounds, assaults, natural catastrophes, and financial stress (Carver et al., 1997). From 0.25 to 1.00, internal consistencies were measured. The Intraclass Correlation Coefficient (ICC) varied from 0.05 to 1.00. The mean differences found in the majority of the domains, where the Effect Size Index (ESI) ranged from 0 to 0.53, indicated the scale's sensitivity. For active coping, planning, and acceptance, there were significant variations between mastectomy and lumpectomy. The brief COPE Scale demonstrated fairly high validity and reliability (Yusoff et al., 2010).

For Arabic version: The test-retest reliability was good at 0.8. A favorable component structure was revealed by confirmatory factor analysis. The scale can be used for clinical study as well as clinical practice (Alghamdi, 2020).

The chosen for the items of adaptive coping was (active coping, positive reframing and emotional support) and for maladaptive coping (self-distraction, denial, venting and behavioral disengagement) related to nature of mothers deal of them and in addition that

Planning, acceptance, positive reframing, and active coping are the go-to coping techniques for mothers of children with autism spectrum disorder (ASD) (Selvakumar & Panicker, 2020). However, contend that adopting constructive coping mechanisms like as involvement and positive reframing in place of avoidant coping methods may actually raise the likelihood of suffering depression and emotional dysregulation (Dardas et al., 2015).

3.9.5 The Brief Illness Perception Questionnaire (IPQ)

The Brief IPQ offers a quick evaluation of people's perceptions of their disease, which may be especially useful in sick populations, large-scale studies, and repeated measures research designs, the nine elements that make up the Brief IPQ. The items were created by creating one question that best encapsulated the elements found in each IPQ-R subscale. So, in addition to the causal scale that was originally used in the IPQ-R, the Brief IPQ also includes eight new items. Except for the causal question, every item is scored using a 0-to-10 response measure. Consequences (Item 1), timeline (Item 2), personal control (Item 3), treatment control (Item 4), and identity (Item 5) are the five items that evaluate cognitive illness representations (Item 5). Concern (Item 6) and feelings are two of the items that evaluate emotional representations (Item 8). Examining disease comprehension is one of the items (Item 7). The eight items in the IPQ every item is scored using a 0-to-10 response measure, the test-retest reliability and concurrent validity of the Brief IPQ with pertinent measures were both acceptable (Broadbent et al., 2006), in addition to work on adjusting the words according to what was modified in the study titled Validating the Revised Illness Perception Questionnaire as a Measure of Parent Perceptions of Autism

Spectrum Disorder. However the study emphasized Throughout many aspects, parent perceptions of other disorders are similar to those regarding their children's Autism spectrum disorder (ASD)(Mire et al., 2018). The same changes were reflected in the Arabic version.

3.9.6 Data collection procedure

Mothers of children with ASD were invited to participate in the study. This process continued until the target number had been achieved (convenient sampling). The study was conducted in schools for children with special needs and rehabilitation centers located northern regions in Palestine. The perspective of mothers on the factors affecting their mental health and occupational balance was captured by a sociodemographic questionnaire and the depression, anxiety, and stress scale DASS-21 in addition to the occupational balance questionnaire, brief resiliance scale brief cope scale and illness perception questionnaire.

Procedure: In September and October 2022, a research proposal was developed and submitted it for ethical approval from the AAUP by filling out the electronic IRB in November 2022. Both the Scientific and Ethics Committees approved the study, and received permission from the AAUP to begin the data collection in April 2023. (AAUP-IRB Code No.: 2023/A/60/N; see (Appendix C).

In May 2023, this cross-sectional study was started. In order to make clear the objectives of the study and how rehabilitation center therapists could contribute, should they be granted permission to join the research team, coordination was established with them prior

3.10 Data analysis

The data analysis was done with SPSS version 26. Descriptive statistics such as percentages and frequencies were used, and the median and IQR were used to evaluate the continuous variables with non-normal distribution. The Mann-Whitney test was used on data with two categories to ascertain the link between sociodemographic traits, resilience, coping with the DASS-21 subscale, and occupational balance. The DASS, OB, and sociodemographic information among mothers of autistic children were analyzed using the Kruskal-Wallis test, which is used to analyze data that has three or more non-normally distributed categories. Spearman's rho was also employed for correlation. Statistical significance is indicated by a p-value of less than 0.05.

Chapter 4 Results

4.1 Recruitment

Participant's recruitment began in May 2023 and finished in November 2023. This study used convenience sampling procedure to recruit mothers of children with ASD from rehabilitation centers and schools for children with special needs in northern region of Palestine Jenin, Nablus and Tulkarem, participants were selected based on predefined inclusion criteria and their voluntary consent to participate in the research.

4.2 Data completeness and normality

There were no missing data. The dataset contained outliers, which were identified through visual evaluation, including the examination of boxplots. Scholars have proposed that it is advisable to retain outliers as they may yield profound and nuanced insights into the intrinsic characteristics and qualities of the data(Aguinis et al., 2013). Consequently, the decision was made to retain outliers in the study, acknowledging that the analysis heavily depends on the influence of these observations. Eliminating them could potentially introduce significant alterations to the resulting outcomes. Given the presence of a non-normal distribution in the data, descriptive measures such as the median and interquartile range were employed. Furthermore, suitable nonparametric tests were utilized to evaluate relationships and explore potential associations between variables.

4.3 Sociodemographic characteristics

4.3.1 Sociodemographic data for the family of ASD children

The main sociodemographic characteristics of this study sample are presented in **Error! Reference source not found.** This study included 94 mothers of children with ASD with a median age of 34 (IQR=29-38). The majority of the mothers were not working ($n = 74$, 78.7%), and had completed their graduate degree ($n = 61$, 64.9%). In terms of the relative relationship between parents of ASD children, most were non-relatives (63.8%) and lived together (94.7%). Regarding the level of income, the majority of the mothers reported having a middle income (85.1%).

4.3.2 Children with ASD characteristics

Regarding ASD children characteristics, the study included majorly a sample of mothers of male children ($n = 69$, 73%). The median number of siblings for the children with ASD was 2 (IQR = 1-3). The age at diagnosis for most children with ASD ranged from 3 to 7 years, with a median age of 3 (IQR = 3-4). In terms of rehabilitation treatment and integration in school, most children ($n = 57$, 60.6%) received treatment at rehabilitation centers, while a smaller proportion ($n = 8$, 8.5%) received treatment at home without integration into the school system at the time of data collection.

Table 3 :Description analysis for sociodemographic characteristics

Variable	<i>n</i> (%)	Median(IQR)
Child gender		
Female	25 (26.60%)	
Male	69(73.40%)	
Child's age		7(5-10)
Number of siblings		2(1-3)
Years of diagnosis		3(3-4)
Rehabilitation and educational services		
School for special needs	11(11.70%)	
Rehabilitation center	57(60.60%)	
At home	8(8.50%)	
Kindergarten	14(14.90%)	
Ordinary school	4(4.30%)	
Place of residency		
City	27(28.70%)	
Village	63(67%)	
Camp	4(4.30%)	

Table 3: continued

Variable	<i>n</i> (%)	Median(IQR)
Economic status		
High income	2 (2.10%)	
Middle income	80 (85.10%)	
Low income	12(12.80%)	
Related parents		
First degree relatives	28(29.80%)	
Distant relatives	6(6.40%)	
Non-relatives	60(63.80%)	
Mother's age		34(29-38)
Working mothers		
Not working	74(78.70%)	
Working	20(21.30%)	
Mothers educational level		
Primary	4 (4.30%)	
Secondary	9 (30.90%)	
Graduate	61(64.90%)	
Father's age		38(35-45)
Fathers educational level		
Primary	13(13.80%)	

Secondary	39(41.50%)
Graduate	42(44.70%)

4.4 Descriptive statistics for the outcome measures

Descriptive statistics for all study outcome measures are presented in table 4

4.4.1 Depression, Anxiety and Stress

The median value on the DASS 21 subscale for depression was 16 (IQR 10–28), with approximately one-third (31.9%) of the mothers reported an extreme level of depression. Similarly, the median for anxiety score was 16 (IQR 6–26), with the majority of mothers (39.4%) reporting an extreme level of anxiety. Regarding stress level the median score was 18 (IQR 12–26), with 42.6% of mothers reported a normal level of stress (Figure 1).

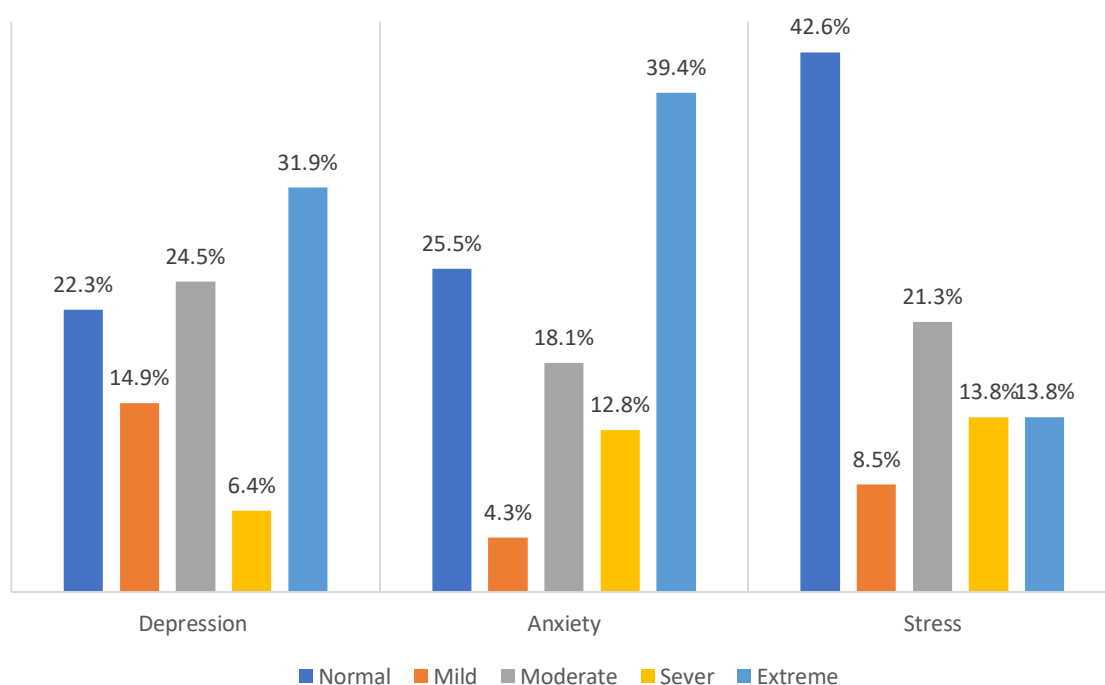


Figure 1: Percentages of the depression, anxiety and stress level for all participants.

Table 4 :Descriptive statistics study outcome measures

Variable	Median (IQR)
DASS21	
Depression	16 (10-28)
Anxiety	16 (6-26)
Stress	18 (12-26)
Occupational Balance	16(11-21)
Brief Resilience	3(2-3)
Brief COPE	
Adaptive coping	
Active coping	6(5-7)
Positive reframing	6(4-7)
Emotional support	5(4-7)
Maladaptive coping	
Self-distraction	5(4-6)
Denial	5(3-6)
Behavioral disengagement	4(2-5)
Venting	5(4-6)
Illness perception Questionnaire	
Consequences	7(5-9)
Timeline	5(3-9)
Personal control	6(4-8)
Treatment control	9(6-10)
Identity	6(5-8)
Concern	8(5-10)

Emotional response	8(7-10)
Understanding	8(5-10)

4.4.2 Occupational balance

The median score for occupational balance was 16, with an interquartile range of 11 to 21. This finding suggests a noteworthy degree of occupational imbalance, as scores equal to or below 17 may indicate a substantial level of imbalance (Håkansson et al., 2020). In the present study a considerable number of participants (60.60%) obtained scores of 17 or lower on the OBQ scale, indicating a notable presence of occupational imbalance among this study sample.

The following is a summary of the respondents' opinions on various aspects of occupational balance, as presented in (Table 5). The results indicate that, on average, mothers feel they have enough activities to do during a regular week, with a ($M = 1.75$, $SD = 0.65$). They also report a good balance between doing things for themselves and for others, with ($M = 1.38$, $SD = 0.79$). In terms of having enough time for desired activities, ($M = 1.57$, $SD = 0.84$). The balance between work, home, family, leisure, rest and sleep received ($M = 1.47$, $SD = 0.85$). Additionally, the respondents reported having sufficient time for mandatory occupations, with ($M = 1.26$, $SD = 0.18$). The balance between physical, social, mental and restful activities received ($M = 1.18$, $SD = 0.81$). Satisfaction with how time is spent in everyday life received ($M = 1.21$, $SD = 0.65$). Furthermore, the respondents reported being satisfied with the number of activities during a regular week, with ($M = 1.35$, $SD = 0.74$). The balance between obligatory and voluntary occupations received ($M = 1.36$, $SD = 0.66$). The balance between energy-giving and energy-taking

activities received ($M = 1.87$, $SD = 0.89$). Finally, satisfaction with time spent in rest, recovery and sleep received ($M = 1.30$, $SD = 0.91$).

Overall, the results suggest that mothers who participated in the study felt they had a reasonable balance between their various responsibilities and activities. The low standard deviation indicates that most data points are close to the mean, indicating consistency in the data. However, the balance between physical, social, mental and restful activities received a slightly lower score from respondents, suggesting that this area may need more attention. This information is crucial for understanding the overall patterns in the results and offers insights into the consistency of the data. (See Figure 2)

Table 5 :Mean and SD for items of the OBQ-11

Items	Mean ± SD
Having sufficient things to do during a regular week	1.75 (.65)
Balance between doing things for others/for oneself	1.32 (.79)
Time for doing things wanted	1.57 (.84)
Balance between work, home, family, leisure, rest, and sleep	1.47 (.85)
Have sufficient time for doing obligatory occupations	1.26 (.81)
Balance between physical, social, mental, and restful occupations	1.18 (.76)
Satisfaction with how time is spent in everyday life	1.21 (.65)
Satisfaction with the number of activities during a regular week	1.35 (.74)
Balance between obligatory/voluntary occupations	1.36 (.66)
Balance between energy-giving/energy-taking activities	1.87 (.89)
Satisfaction with time spent in rest, recovery, and sleep	1.30 (.91)

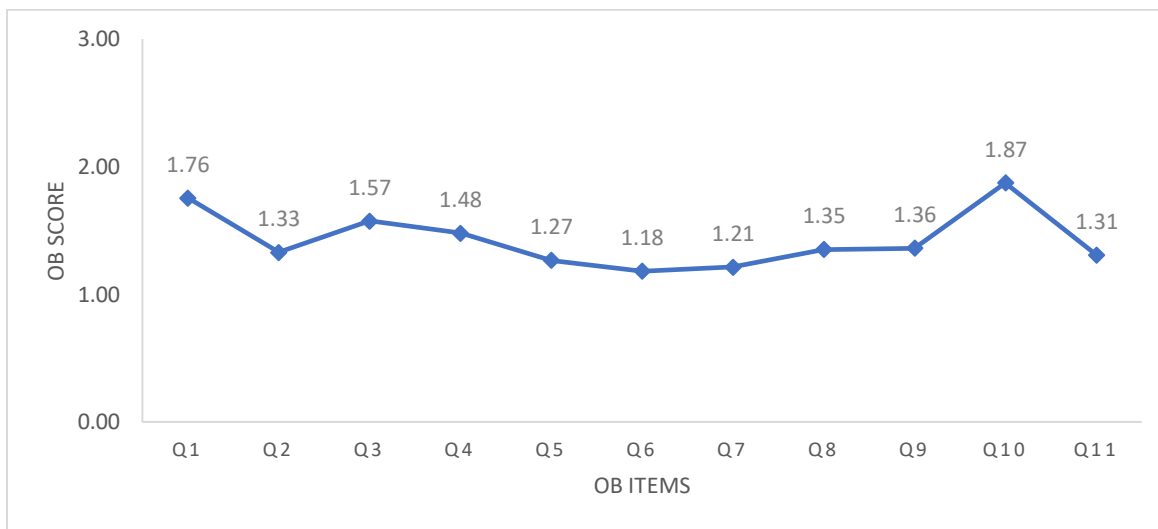


Figure 2: The mean of each item in OBQ-11 for all participants.

The results of an occupational balance questionnaire, which aimed to gauge how participants felt about their occupational balance, have been presented in (Table 6). To make the presentation of data easier, the responses for 'strongly agree' and 'agree' have been combined, as have the responses for 'strongly disagree' and 'disagree'. The results show that 63 (67.0%) of respondents disagreed with the balance between physical, social, mental, and restful occupations. Similarly, 62 (66.0%) disagreed with their satisfaction with how they spend time in their everyday life. Additionally, in terms of satisfaction with rest, recovery, and sleep, 58 (61.7%) of mothers disagreed, while 72 (76.6%) agreed.

Table 6: Percentage of the item's responses for OBQ-11

Items	Disagree	Agree
Having sufficient things to do during a regular week	22 (23.4%)	72 (76.6%)
Balance between doing things for others/for oneself	54 (57.4%)	40 (42.6%)
Time for doing things wanted	40 (42.6%)	54 (57.4%)
Balance between work, home, family, leisure, rest, and sleep	45 (47%)	49 (52.1%)
Have sufficient time for doing obligatory occupations	57 (60.6%)	37 (39.4%)
Balance between physical, social, mental, and restful occupations	63(67.0%)	31 (33.0%)
Satisfaction with how time is spent in everyday life	62(66.0%)	32 (34.0%)
Satisfaction with the number of activities during a regular week	54 (57.4%)	40 (42.6%)
Balance between obligatory/voluntary occupations	54 (57.4%)	40 (42.6%)
Balance between energy-giving/energy-taking activities	28 (29.8%)	64(68.1%)
Satisfaction with time spent in rest, recovery, and sleep	58 (61.7%)	36 (38.3%)

4.4.3 Resilience

The median score on the (BRS) was 3 (IQR=2-3) suggesting a normal resiliency level (Smith et al. 2013). In this study, a majority of the study sample (55.3%) exhibited a normal level of resilience, while over 40% demonstrated a low resilience level. For example, 55.30% of the study sample had a score of 3 on the BRS. (Figure 3).

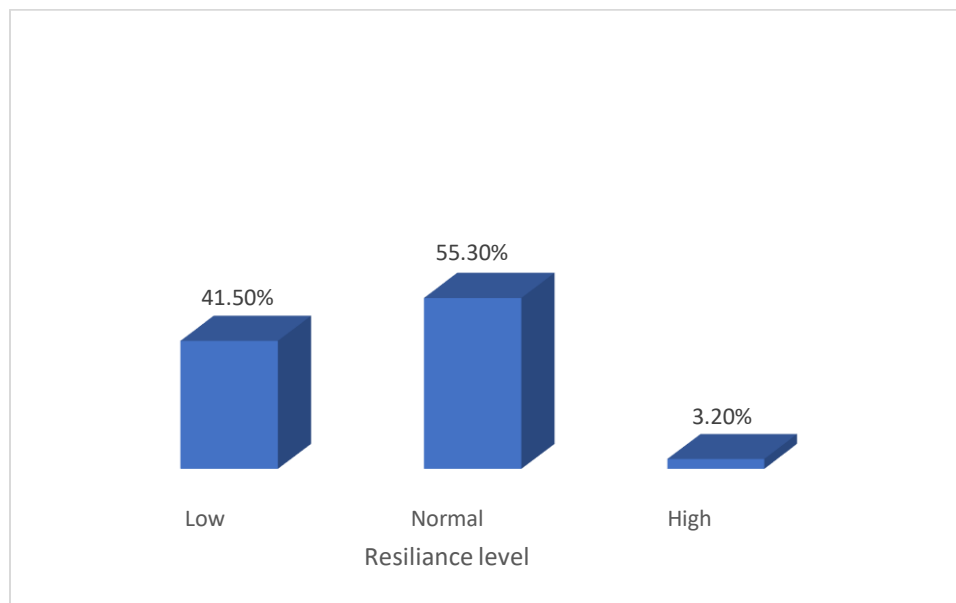


Figure 3: Percentages of the resilience level for all the participants.

4.4.4 Coping

Descriptive statistics for brief COPE, high score indicates the adoption of coping strategies intended to control feelings based on by the stressful circumstance. The finding showed that participants responded with adaptive coping strategies, (emotional support, positive reframing, and active coping) with scores greater than the midpoint on the adaptive coping scale. The median scores were 5 (IQR = 4-7), 6 (IQR = 4-7), and 6 (IQR = 5-7), respectively. However, some participants also showed maladaptive coping strategies, (denial, behavioral disengagement, self-distraction, and venting, with scores greater than the midpoint on the maladaptive coping scale. The median scores were 5 (IQR = 3-6), 4 (IQR = 2-5), 5 (IQR = 4-6), and 5 (IQR = 4-6), respectively. Based on the data, it can be concluded that participants exhibited a range of adaptive coping methods, including active coping, positive reframing, and emotional support. Maladaptive coping

mechanisms, such as behavioral disengagement, self-distraction, and denial, were also shown by just a few percent of the participants.

4.4.5 Illness perception

The analysis of the eight items in the IPQ among mothers of children with ASD revealed notably elevated scores in the domains of concern the median was 8 (IQR 5-10), understanding 8 (IQR 7-10), and emotional response 8 (IQR 5-10), indicating that they were worried about the impact of their children with ASD on their lives, had a good understanding of the disorder, and were emotionally affected as a result of having a child with ASD. However, they also expressed high score of confidence in the effectiveness of treatment the median was 9 (IQR 6-10), suggesting that symptoms could be controlled with proper treatment. Participants also believed that they could control their children's disorder on their own to some extent the median was 6(IQR4-8). The participants perceived ASD as a disorder that child disorder will continue for a long time the median was 5(IQR3-9), in addition the median for the effect of disorder for the participant life was 7(IQR 5-9), with participant results relative to each item distributed throughout a full-scale range (0-10). As for the open-ended question of the brief IPQ (item 9) regarding the possible causes of ASD disorder, participants believed that "TV and smartphones" were the main causes (n = 36, 38.30%), followed by "lack of social interaction" (n = 31, 32.98%), "environmental factors" (n = 29, 30.85%), and "genetic factors" (n = 21, 22.34%). It is worth noting that (14.89%) of participants showed "no reason" when asked about the causes of ASD disorder.

4.5 Factor associated with mental health status and occupational balance

4.5.1 Factor associated with mental health status

A Mann-Whitney U test was conducted to examine association among DASS-21 subscale scores and mothers working status (Table 7). The mean ranks for depression ($M = 44.34$, $U = 887.50$, $p = .563$), anxiety ($M = 43.25$, $U = 856.00$, $p = .431$), and stress ($M = 45.00$, $U = 900.00$, $p = .643$) were lower in the working mothers compared to the non-working mothers. However, there was no statistically significant difference observed between working and non-working mothers in terms of the DASS-21 subscales.

Table 7: Mann-Whitney test (U-test) for the difference in the DASS subscale between working and not working mothers.

DASS subscales by working mother		Mean rank	<i>U</i>	<i>Z</i>	<i>P</i>
Depression	Working	44.34	677.500	-.579	.563
	Not working	48.34			
Anxiety	Working	43.25	355.000	-.787	.431
	Not working	48.65			
Stress	Working	45.00	690.000	-.463	.643
	Not working	48.18			

*DASS depression anxiety stress scale, U Mann-Whitney U test statistic, Z critical value of the Z distribution * $p < .05$ ** $p < .01$.*

The Kruskal-Wallis test was conducted to explore the association between DASS-21 subscales and mother's educational level and social status, (Table 8), The results indicated no significant differences in DASS scores among different levels of mother education for depression ($H(2) = .836$, $p = .658$), anxiety ($H(2) = 1.737$, $p = .419$), and stress ($H(2) =$

1.042, $p = .594$). Furthermore, the association between the DASS subscales and social status demonstrated no significant differences for depression ($H(2) = 1.079$, $p = .51$), anxiety ($H(2) = 2.596$, $p = .273$), or stress ($H(2) = .927$, $p = .629$).

Table 8 :A Kruskal-Wallis H test association DASS subscale scores by mothers' educational level and social status.

Variables	level	N	Mean rank	Kruskal-Wallis H	P_value
DASS_Depression	Primary	4	59.63	.836	.658
With mothers' education	Secondary	29	47.31		
	Gradate	61	46.80		
DASS_anxiety	Primary	4	65.00	1.737	.419
With mothers' education	Secondary	29	47.17		
	Gradate	61	46.51		
DASS_stress	Primary	4	60.00	1.042	.594
With mothers' education	Secondary	29	48.60		
	Gradate	61	46.16		
DASS_Depression with mothers' social status	Living together	89	47.14	1.079	.583
	Divorced	4	48.50		
	Widowed	1	75.50		
DASS_anxiety with mothers' social status	Living together	89	46.79	2.596	.273
	Divorced	4	52.88		
	Widowed	1	89.50		
DASS_stress with mothers' social status	Living together	89	47.25	.927	.629
	Divorced	4	46.50		
	Widowed	1	73.50		

Kruskal-Wallis test H ,df degree of freedom, ,N number of participant, $p < .05$ $p < .01$

Spearman's rho test was computed to explore the relationship between DASS with mother age, number of siplings, reselliance, and coping strategies (Table 9). The analysis regarding to mother age there were no significant correlations between depression, anxiety, stress, with mother age ($r = -0.006, p > 0.05$; $r = -0.053, p > 0.05$; $r = 0.078, p > 0.05$) or DASS depression, anxiety and stress with the number of siblings ($r = -0.033, p > 0.05$; $r = -0.023, p > 0.05$; $r = 0.60, p > 0.05$). Based on the findings, there may not be a significant correlation between the mother's age, the number of siblings DASS, depression, anxiety, or stress.

Ultimately, the findings in the area of the DASS with resilience indicate that resilience was negatively correlated with stress, anxiety, and depression ($r = -0.386, p < 0.01$; $r = -0.409, p < 0.01$; $r = -0.293, p < 0.01$, respectively). Indicating mothers with higher resilience levels reduced stress, anxiety, and depression. This demonstrates that resilience can help with difficult situations and lead to better mental health results.

Regarding adaptive coping, it was discovered that anxiety and stress had no significant correlation with active coping ($r = -.010, p = .922$, and $r = -.089, p = .394$, respectively), while depression had a negative correlation with it ($r = -.160, p < .01$). While anxiety and stress did not substantially correlate with positive reframing ($r = -.118, p = .259$ and $r = -.089, p = .393$, respectively), depression was adversely connected with positive reframing ($r = -.178, p = .086$). Lastly, there was no significant correlation found between stress and emotional support ($r = -.163, p = .115$); however, there was a negative correlation between depression and anxiety ($r = -.219, p = .034$ and $r = -.160, p = .123$, respectively). These

results imply that although stress and anxiety may not directly affect adaptive coping and positive reframing, depression could hinder adaptive coping strategies.

In terms of maladaptive coping, there was no significant correlation found between anxiety, stress, and self-distraction ($r = -.087$, $p = .019$, and $r = -.155$, $p = .136$, respectively); however, there was a negative correlation between depression and self-distraction ($r = -.241$, $p < .05$). While anxiety and denial were not substantially correlated ($r = .140$, $p = .178$) and stress and denial were weakly correlated ($r = .207$, $p = .045$), depression and denial were positively correlated ($r = .225$, $p < .05$). Finally, behavioral disengagement was highly connected with depression and anxiety ($r = .278$, $p < .01$ and $r = .214$, $p < .05$, respectively), but only weakly correlated with stress ($r = .213$, $p = .040$). The results indicate that various mental health status was linked to various coping strategies. While self-distraction was found to be associated negatively with depression, it was not a significant coping technique for individuals experiencing stress or anxiety. Denial was linked to stress and depression, but it was not a useful coping strategy for anxiety. Anxiety and depression were strongly correlated with behavioral disengagement.

However, venting had a negative correlation with depression, anxiety, and stress had correlation coefficients of -0.079 , -0.032 , and -0.012 , respectively. These values were statistically significant ($p < 0.05$). Based on this result, venting can improve mental health, as seen by the statistically significant correlation coefficients found between it and certain mental health problems

Table 9 Spearman's rho Correlation between the DASS-21 and mother age, number of siblings, resiliance, adaptive coping and maladaptive coping using Spearman's rank correlation coefficients. Data are presented as correlation coefficient (p value).

Variables	DASS-21 Depression	DASS-21 Anxiety	DASS-21 Stress
Occupational balance	-.461** ($p=.000$)	-.391** ($p=.000$)	-.461** ($p=.000$)
Mother Age	-.006 ($p=.956$)	-.053 ($p=.609$)	.078 ($p=.453$)
Number of siblings	-.033 ($p=.755$)	-.023 ($p=.823$)	0.60 ($p=.566$)
Resilience	-.386** ($p=.000$)	-.409** ($p=.000$)	-.293** ($p=.004$)
Adaptive coping			
Active coping	-.160 ($p=.124$)	.010 ($p=.922$)	-.089 ($p=.394$)
Positive reframing	-.178 ($p=.086$)	-.118 ($p=.259$)	-.089 ($p=.393$)
Emotional support	-.219 ($p=.034$)	-.160* ($p=.123$)	-.163 ($p=.115$)
Maladaptive coping			
Self-distraction	-.241* ($p=.124$)	-.087 ($p=.019$)	-.155 ($p=.136$)
Denial	.225* ($p=.029$)	.140 ($p=.178$)	.207* ($p=.045$)
Behavioral disengagement	.278** ($p=.077$)	.214* ($p=.038$)	.213* ($p=.040$)
Venting	-.079 ($p=.451$)	-.032 ($p=.760$)	-.012 ($p=.912$)

*correlation is significant at the 0.05 level (2-tailed)

**correlation is significant at the 0.01 level (2-tailed)

4.5.2 Factor associated with occupational balance

A Mann-Whitney U test was conducted to explore association between OBQ and working mothers' status had a mean rank of ($M = 51.48$, $U = 660.500$, $p = .462$) the mean rank of not-working mothers was lower than working mothers ($M = 46.43$, $U = 660.500$, $p = .462$) that there was no statistically significant difference between them. The finding indicates that working mothers had more occupational balance. (Table 10)

Table 10: Mann-Whitney test (U-test) for the difference in the OB between working and not working mothers.

OB by working mothers		Meanrank	<i>U</i>	<i>Z</i>	<i>P</i>
OB	Working	51.48	660.500	-.736	.462
	Not working	46.43			

*OB occupational balance, U Mann-Whitney U test statistic, Z critical value of the Z distribution * $p < .05$ ** $p < .01$.*

The Kruskal-Wallis test was conducted to examine the factor related to occupational balance with mothers educational level($H(2) = .427$, $p = .109$) and for social status($H(2) = .283$, $p = .868$) ,there was no statically significant difference ,these finding imply that a mother's mental health and occupational balance are not always determined by their educational level *and social status.*(Table 11)

Table 11: A Kruskal-Wallis H test association occupational balance by mothers' educational level and social status

Variables	level	N	Mean rank	Kruskal-Wallis H	P_value
OB With mothers' education	Primary	4	21.88	.427	.109
	Secondary	29	52.19		
	Gradate	61	46.95		
OB with mothers' social status	Living together	89	47.15	.283	.868
	Divorced	4	53.63		
	Widowed	1	54.50		

Kruskal-Wallis test H, df degree of freedom, N number of participants, OB, occupational balance , $p < .05$ $p < .01$

Spearman's rho test was computed to explore the relationship between resilience, coping mechanisms, mother age and number of siplings and occupational balance summarized (Table 12). The number of siblings and occupational balance had a negative correlation ($r = -0.055$, $p = 0.596$), while the mother's age had a positive correlation ($r = 0.138$, $p = -0.154$). The finding indicating that the relationship was not statistically significant. This suggests that occupational balance increases with the mother's age but decreases with the number of siblings.

Regarding to reselliance the correlation coefficient and p-value for occupational balance with resilience demonstrated a highly statistically significant association between occupational balance and resilience, with $r = 0.432$, $p = 0.000$). Indicating that developing resilience increases occupational balance. In addition, the correlation coefficient and p-value for occupational balance with different coping strategies showed that adaptive coping strategies such as active coping ($r = -0.077$) positive reframing ($r = 0.184$), and emotional support ($r = 0.284$) are positively correlated with occupational balance. On the other hand, maladaptive coping strategies including behavioral disengagement ($r = -0.030$) and denial ($r = -0.094$) are negatively correlated with occupational balance. Additionally, the data point to a weakly positive association between venting ($r = 0.215$) and self-distraction ($r = 0.166$) with occupational balance. All of the coping strategies have p -

values that are either positive or over 0.05, which suggests that the association was weak or not statically significant. According to the data, mothers may be more likely to have better occupational balance if they adopt adaptive coping techniques including active coping, positive reframing, and emotional support. However, maladaptive coping strategies such as behavioral disengagement and denial enhance the chance of occupational imbalance in mothers

Table 12 :Spearman's rho Correlation between the OB and mother age, number of siblings, resilience, adaptive coping and maladaptive coping using Spearman's rank correlation coefficients. Data are presented as correlation coefficient (p value)

Variables	Occupational balance
Mother Age	.138 ($p=.154$)
Number of siblings	-.055 ($p=.596$)
Resilience	.432** ($p=.000$)
Adaptive coping	
Active coping	-.077 ($p=.463$)
Positive reframing	.184 ($p=.067$)
Emotional support	.284** ($p=.005$)
Maladaptive coping	
Self-distraction	.166 ($p=.109$)
Denial	-.094 ($p=.368$)
Behavioral Disengagement	-.030 ($p=.775$)
Venting	.215* ($p=.037$)

*Correlation is significant at the 0.05 level (2-tailed)

**correlation is significant at the 0.01 level (2-tailed)

4.5.3 The association between DASS-21 and OB-11

The analysis's findings showed that OB and depression had a negative correlation with statically significant ($r = -.461$, $p < .01$), that anxiety had a strong negative significant correlation with OB ($r = -.391$, $p < .01$), a statically significant association ($r = -.461$, $p < .01$) between stress and OB was found. These results suggest that it is important to

enhance occupational balance to enhance mental health. Occupational balance is substantially inversely connected with the variables Depression, Anxiety, and Stress ($p=.000$) (Table 13)

Table 13: Spearman's rho Correlation between DASS-21 and OBQ-11 using Spearman's rank. Data are Presented as correlation coefficient (p value)

Variables	DASS-21 Depression	DASS-21 Anxiety	DASS-21 Stress
Occupational balance	-.461** ($p=.000$)	-.391** ($p=.000$)	-.461** ($p=.000$)

***correlation is significant at the 0.01 level (2-tailed)*

**correlation is significant at the 0.05 level (2-tailed)*

Chapter 5 Discussion and Conclusion

5.1 Discussion

This study aimed to examine the levels of depression, anxiety, stress and occupational balance among Palestinian mothers who had children with ASD, in addition the study sought to identify the factors associated with these mental health outcomes and occupational balance. This Chapter is divided into the following sections; Mental health status and, Occupational balance, conclusion, limitation and future research recommendations and occupational therapy implication.

5.2 Mental health status and Occupational balance

Regarding to mental health status this research result showed with approximately one-third (31.9%) of the mothers reported an extreme level of depression,(39.4%) reporting an extreme level of anxiety, with 42.6% of mothers reported a normal level of stress in comparison with the result of previous studies founded that 60.4% of the moms had depression symptoms, of which 42.9% had mild-to-moderate symptoms, furthermore, it was discovered that 46.2% of the moms had anxiety, with 16.5% of them displaying severe anxiety (Selvakumar & Panicker, 2020). In addition to cross sectional study recruited 146 parents of children with ASD indicated that almost 61%, 52.9%, and 53.7% reported having to deal with mild to severe stress, anxiety, and depression respectively (Alibekova et al., 2022).Furthermore , a cross sectional study recruited 80 mothers of children with ASD indicated that over 50% of mothers with children diagnosed with ASD

report low levels of stress and mental health issues without a psychiatric condition, moms experience more parenting stress for children with ASD (Hartini et al., 2021).

Regarding the level of occupational balance in the present study, a considerable number of participants (60.60%) obtained scores of 17 or lower on the OBQ scale, indicating a notable presence of occupational imbalance among this study sample (Håkansson et al., 2020). This finding suggests a noteworthy degree of occupational imbalance, there were no similar studies targeting mothers' populations of children with ASD. Additionally, lack of previously conducted studies on mothers of children with ASD is also remarkable, which emphasizes the importance of this study's findings in figuring out the occupational balance in this particular group of mothers.

5.3 Factor associated to mental health

Regarding to mothers' educational level and social status there was no significant correlation with a mother's mental health that is imply that mental health status not always determined by their educational level and mothers' social status. However, previous research emphasized that level of education of the mother's effect of the perception of the ASD and of the psychological status and indicated that mother's level of education and their impression of ASD were found to be strongly positively correlated, and there was a substantial positive correlation between the experience of internalized stigma, anxiety, and depression and the presence of anxiety and depressive symptoms(Öz et al., 2020),in addition that parents with greater levels of education would be more conscious of the complexities of the condition and the challenges associated with it, as well as have higher

expectations for their child's growth (Ntre et al., 2022). It has been discovered that single mothers of children with ASD face financial difficulties, social exclusion, rejection, and stigma these challenges may have a negative impact on the mental health of single mothers hence, single mothers for child with ASD faces challenges could negatively impact their mental status (Mbamba & Ndemole, 2021).

Regarding to working mothers the study findings showed that the mean ranks for depression ($M = 44.34$, $U = 887.50$, $p = .563$), anxiety ($M = 43.25$, $U = 856.00$, $p = .431$), and stress ($M = 45.00$, $U = 900.00$, $p = .643$) were lower in the working mothers compared to the non-working mothers and there was no statistically significant difference observed between working and non-working mothers in. Moreover, the level of depression, anxiety and stress lower in the working mothers compared to the non-working mothers. Hence, mothers who are not working reported more severe mental health symptoms. Previous research showed that mothers continued to appear more nervous due to increasing responsibilities in other areas of the house and household (Hastings, 2003), however mothers of ASD children who abandoned their jobs to care for their kid at home had higher rates of depressive symptoms than mothers of ASD children who worked and other mothers who worked expressed a higher sense of worth in their life than women who left their jobs to care for their autistic kid at home working moms expressed a desire to maintain their independence outside of parenting (Benson, 2021).

Regarding to the finding of resilience there was significant correlation with mental health (depression, anxiety and stress) demonstrated that reselliance can help with difficult situations and lead to better mental health results. In addition, recent research indicated

that greater attention needs to be directed to the variables influencing resilience and given the strong correlation between resilience and the stress of care, educational programs for these mothers can incorporate strategies for learning aimed at enhancing resiliency (Rasoulpoor et al., 2023). Furthermore, the previous studies indicate that family functioning has an impact on family resilience and reduce the negative impact of stress on mental health (Gau et al., 2012). There is recommendation to take in the consideration the strategies that enhancing family resilience for risk factors in ASD child households (Al-Jadiri et al., 2021). In addition, mother resilience are protective variables for the mental health of mothers (Nahar et al., 2022).

Regarding to Coping depression can impede adaptive coping mechanisms. Different coping methods were associated with different mental health conditions. Behavioral disengagement is highly connected with both depression and anxiety and venting can help with mental health while, previous studies emphasized that mothers received therapy enhance their mental health in comparison with mothers without therapy related to their mental health (Stanford et al., 2020). However, various mental health status linked to various coping strategies. As self-distraction was found to be associated negatively with depression, it was not a significant coping technique for individuals experiencing stress or anxiety. Denial was linked to stress and depression, but it was not a useful coping strategy for anxiety. Anxiety and depression were strongly correlated with behavioral disengagement. The previous study clarified that the mothers used active coping, positive reframing, acceptance, planning, and religious coping as their main coping strategies (Selvakumar & Panicker, 2020).

It was discovered that women with lower mental health are those who are uncomfortable with uncertainty, depend more on avoidant coping, and utilize less problem-focused coping (Cai et al., 2020). In addition, incorporating coping strategies and addressing psychological distress in mothers are crucial to complete care for children diagnosed with ASD (Selvakumar & Panicker, 2020) . Mental health practitioners should look into coping mechanisms for managing the difficulties of raising an ASD child. (Ntre et al., 2022) The adoption of acceptance cope strategies was substantially more common among those with greater levels of education (Demšar et al., 2023). Maternal stress levels were found to be inversely correlated with the number of useful coping mechanisms mothers used (Kiami et al., 2017). Moreover, the evidence indicates that the mental health for mothers attaining therapeutic levels of anxiety and sadness was higher than in the mothers did not attain therapy (Stanford et al., 2020).

The finding of IPQ among mothers of children with ASD Indicating that they were worried about the impact of their children with ASD on their lives, had a good understanding of the disorder, and were emotionally affected as a result of having a child with ASD. In addition, that symptoms could be controlled with proper treatment. Participants also believed that they could control their children's disorder. Comprehending the variables that impact parents' decisions regarding treatment can improve the capacity of professionals to assist families affected by ASD. The previous study showed there was significantly advance knowledge regarding the unique characteristics of ASD treatment decisions made by parents, as practitioners work to engage with and satisfy the needs of afflicted children and their families (Mire et al., 2017). Plus, noteworthy percentage of

parents whose children with ASD exhibit clinically significant depressive symptoms. These symptoms were linked to perceptions of disease related to the disorder's long-term effects and implications (Gatzoyia et al., 2014). Lastly, to improve parents' quality of life, interventions should focus on managing the disorder's characteristics and putting in place psychoeducational and sustaining programs for them as soon as they receive the diagnosis (Norozi et al., 2023).

5.4 Factors associated to occupational balance

Regarding to mothers age and number of siblings the finding indicating that the relationship was not statistically significant. There was slight difference suggests that occupational balance increases with the mother's age but decreases with the number of siblings It is possible that the mother's advance in age is due to an increase in the desire to adapt to the child and a greater understanding of the nature of the difficulties and the number of difficulties tends to decrease as the number of children increases, this could be attributed to the mothers' high level of responsibilities. Recent study sought to characterize the occupational balance of parents of preschoolers and investigate any possible disparities between fathers and mothers by online survey based on the Occupational Balance Questionnaire (OBQ11) and included a total of 302 working parents, mothers reported a weaker occupational balance than fathers and clarified that taking care of young children can have a detrimental effect on mothers' occupational balance and older mothers are less balanced than younger parents compared to parents of only one child staying at home, parents of many young kids who live at home full-time self-rate their occupational balance lower (Uthede et al., 2023).

The study finding indicated that working mothers had more occupational balance; however, in previous qualitative research mothers reported that the workplace is a rest place for them. Moreover, compared to other mothers, mothers of children with ASD seem to compromise their social life by concentrating more of an emphasis on their jobs rather than looking for opportunities to socialize and they underlined how crucial it is to avoid taking care of oneself ,they described the challenges faces in this demanding procedure and how longs for the simpler times and routines of the past that, their children's brief attendance at school provided them with important breathing space. Nonetheless, they claimed that throughout these times, they were able to take care of their personal requirements as well as their basic necessities and domestic chores (Karahan et al., 2022).

There was no statically significant difference, these finding imply that an occupational balance is not always determined by their educational level and social status. During the current research, women worked part-time more frequently than men were doing, despite having completed their higher level of education, and fewer women were employers to handle childcare and household duties (Håkansson et al., 2019).

In this study, a majority of the study sample (55.3%) exhibited a normal level of resilience, while over 40% demonstrated a low resilience level. In addition, the finding indicates that developing resilience increases occupational balance. For mothers of autistic children to successfully navigate their daily lives, they need a strong support system and the capacity to grow resilient. Getting treatment, joining support groups, and interacting with other mothers on social media can help provide a solid foundation for mother and child (Santoso et al., 2015).

According to the data, mothers may be more likely to have better occupational balance if they adopt adaptive coping techniques including active coping, positive reframing, and emotional support. However, maladaptive coping strategies such as behavioral disengagement and denial enhance the chance of occupational imbalance in mothers. According to previous study, creating regular family routines can give moms for children with ASD, and their entire family structure, order, and consistency. The families benefit from these routines in many ways, which make their daily life easier and more structured (McAuliffe et al., 2019). There is a lack of studies that examine the factors that affect the occupational balance of mothers of children with ASD; hence, the findings of this study add a valuable finding related to occupational balance. It was the first time examined the factors related to occupational balance with mothers of children with ASD.

The study finding showed that the balance between physical, social, mental and restful activities received a slightly lower score from respondents, suggesting that this area may need more attention. This information is crucial for understanding the overall patterns in the results and offers insights into the consistency of the data. In addition, the results showed that (67.0%) of respondents disagreed with the balance between physical, social, mental, and restful occupations. Similarly, (66.0%) disagreed with their satisfaction with how they spend time in their everyday life. Additionally, in terms of satisfaction with rest, recovery, and sleep, (61.7%) of mothers disagreed, while (76.6%) agreed.

It is important to highlight that there have been no previous studies examining the level of occupational balance among mothers of children with ASD, but some studies in general confirm that families that have children with ASD have limited chances to engage in

leisure and recreation activities (Jones et al., 2017), furthermore mothers of children with ASD have several responsibilities related with various tasks, but due to their time limits, they often sacrificed, social activity, rest and sleep, and other areas of occupation in order to focus their time on child care(Hodgetts et al., 2014).It was recommended these mothers require support from others in carrying out tasks and maintaining balance in their everyday tasks as husband, relatives, and neighbors (Santoso , 2021).

Furthermore challenges faced the mothers of children with ASD as the time load because these mothers devote the majority of their time to their children with ASD and these moms find it difficult to engage in a variety of fulfilling tasks, including employment, recreation, time with their families, social interactions (Haq et al., 2020) .Hence ,they have had to significantly change their everyday routines and they have thereby been forced to neglect their obligations to their careers, social lives, downtime, and sleep (Santoso , 2021).

5.5 The association between DASS-21 and OBQ-11

The results of the analysis revealed a statically significant association ($r = -.461, p <.01$) between stress and OB, a strong negative significant correlation ($r = -.391, p <.01$) between anxiety and OB, and a negative correlation ($r = -.461, p <.01$) between OB and depression. These results suggest that enhance occupational balance led to enhance mental health. Occupational balance is substantially inversely connected with the variables Depression, Anxiety, and Stress, the previous study clarifies that occupational balance was connected with a high quality of life, high satisfaction with daily functioning, and a low degree of unhappiness. Improved life satisfaction and achievement in daily tasks, are

important factors in achieving occupational balance in clients with mental health problems (Wagman et al., 2021). Furthermore, encouraging more balance between life can enhance life satisfaction and subjective well-being (Park et al., 2021).

5.6 Conclusion

The alarmingly high rates of anxiety and depression among Palestinian women raising children with autism spectrum disorder (ASD) were highlighted by the study. The results also showed that many of these mothers had difficulty striking a balance between their personal and daily performance life. Relevant variables were found to include a variety of elements, including sociodemographic information, resilience, coping mechanisms, and attitudes toward disorder. Prioritizing these moms' occupational balance and mental wellness is critical

Healthcare practitioners ought to possess a distinct viewpoint that they might utilize throughout dealing with the mothers of children with ASD. Moreover, it's critical to comprehend how mothers' everyday lives can be disrupted by various variables including the changes to their routines, roles and mental health when they have a child with ASD. In addition to governmental and policy maker efforts can help mothers who are facing challenges in their daily lives manage their daily lives by implementing a strategy after they have a child diagnosed with ASD, the process might involve time management techniques, readjusting to healthy routines, and stress reduction techniques

Enhancing and promoting mental health and occupational balance and other associated rehabilitation programs for Palestinian, especially for mothers is imperative. Reducing the

stigma attached to mental health evaluation and therapy requires official government and enhanced awareness from rehabilitation centers that support the development and use of such services among mothers. Additionally, mothers may need to discuss their time spent on hobbies or exercise with health care providers. Mothers who are readjusting and maintaining their occupational balance benefit greatly from the assistance of their health care professionals.

Previous literature has not examined all factors related to the mental health of mothers of ASD children, objective and subjective factors effect on mental health for mothers. The sociodemographic factors especially age, social status, level of education, and work status (sometimes mothers stay at home to care for a child with autism. On the other hand, the personal character and cultural values stigma and level of perception make the difference in mental health. Hence enhance occupational balance for mothers and awareness towards mental health services must be enhanced and encouraged to reduce negative attitudes towards mental health and encourage mothers to access mental health services and enhance their quality of life and maintain their occupational balance.

Lastly, the study finding suggest that having a child with ASD affected the mental health and occupational balance of Palestinian mothers. It may be important to give these groups occupational therapy support in parallel to the therapy plan for their children throughout the health care clinician. It is recommended that focused interventions be executed in order to tackle the recognized traits and facilitate improved mental well-being and occupational balance. The study's conclusions have ramifications for worldwide studies and initiatives designed to assist mothers in comparable circumstances outside of the Palestinian context.

5.7 Limitations

The present study had some limitations that would be worth mentioning, this study does not accurately reflect all mothers in Palestine. The participants were mainly recruited only from northern region of Palestine. However, the prevalence of ASD is not available in the Palestinian Central Bureau of Statistics, therefore, this sample might not represent the mothers of children with ASD population. Moreover, the number of participants on the used sample was relatively small. Therefore, recommend the future study to use a more representative sample of participant. Despite these limitations, the present study added valuable foundation data that is useful to support mothers of children with ASD. Finally, the self-reported outcome measures might have been affected in psychosocial factors and patient background at the time in filling the data possible effect on the (Chang Et Al., 2019).

5.8 Future Research Recommendations and occupational therapy implication

The current study used self-report measures to examine subjective mental health, occupational balance, resilience, coping, and illness perception among Palestinian mothers of children with ASD. Future research may want to examine the objective measures in this population; as well as, the primary caregivers report about the mental health and occupational balance for these mothers. Unfortunately, there is a lack of experimental studies about the effect of different rehabilitation interventions on the Palestinian mothers who having children with ASD. In addition to a future study of interventional studies for

various strategies that related to mental health and occupational balance are also recommended.

Returning to the results of the high degree of depression and anxiety among mothers of autistic children, and with the exhaustion of the role of occupational therapy in working to improve the quality of life for individuals, it worth to recommend that there be a plan to measure occupational balance and raise awareness in coping and resilience at the same time when intervening with the child, as it reflects a positive report about the lives of mothers and facing challenges. Furthermore, encouraging more occupational balance can enhance life satisfaction and subjective health. To support the mothers during the interventional of the therapy which is reflect on their lifestyle and health, more research is needed to build an occupational balance-based intervention program (Park et al., 2021). According to Ikiugu et al. (2017), occupational therapists emphasize that mental health and occupational performance go together by hand to improve psychological wellness and productivity (Ikiugu et al., 2017).

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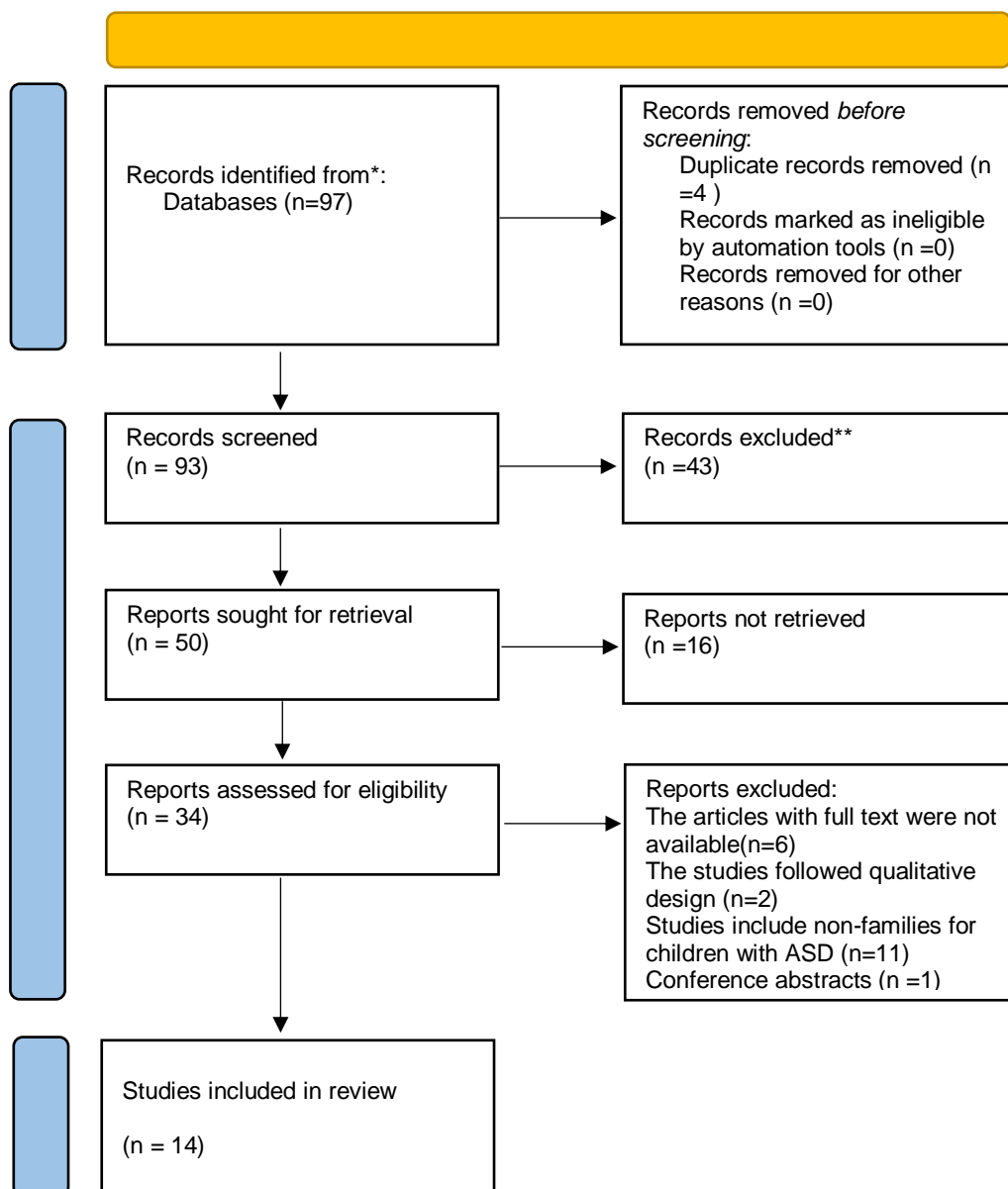
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Appendices

Appendix A Prisma



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71

Appendix B IBB approval

Arab American University- Palestine
 Deanship of Scientific Research
 IRB committee
 Tel: 04-241-8888, ext 1196
 E-mail: irb_aaup@aaup.edu



الجامعة العربية الأمريكية فلسطين
 عمادة البحث العلمي
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IRB Approval Letter

Study Title: Exploring mental health status and occupational balance among Palestinian mothers of children with Autism spectrum disorder(ASD): A cross sectional study

Submitted by: Wissam Nimmer Hassan Muhsen

Date received: 03/04/2023

Date reviewed: 19/04/2023

Date approved: 19/04/2023

Your Study titled "Exploring mental health status and occupational balance among Palestinian mothers of children with Autism spectrum disorder(ASD): A cross sectional study " With archived number 2023/A/60/N was reviewed by the Arab American University IRB committee and was approved on 19/04/2023.

Reham Khalaf-Nazzal, MD, PhD
 IRB committee chairman
 Arab American University of Palestine



General Conditions:

1. Valid for four months from date of approval.
2. It is important to inform the committee with any modification of the approved study protocol.
3. The committee appreciates a copy of the research when accomplished.

Appendix C Facilitating a research mission

Arab American University
Faculty of Graduate Studies



الجامعة العربية الأمريكية
كلية الدراسات العليا

2023/8/9

إلى من يهمه الأمر

تسهيل مهمة بحثية

تحية طيبة وبعد،

تُهدىكم كلية الدراسات العليا في الجامعة العربية الأمريكية أطيب التحيات، وبالإشارة إلى الموضوع أعلاه، تشهد كلية الدراسات العليا في الجامعة أن الطالبة وسام تمر حسن محسن والتي تحمل الرقم الجامعي 202113315 هي طالبة ماجستير في برنامج العلاج الوظيفي وتعمل على أطروحة الماجستير الخاصة بها بعنوان:

" استكشاف الحالة النفسية والتوازن الوظيفي لأمهات الأطفال المصابين باضطراب طيف التوحد في فلسطين"، تحت إشراف الدكتور هشام كعبية. نأمل من حضرتكم الإيعاز لمن يلزم لمساعدتها للحصول على المعلومات اللازمة للدراسة طمأ أن المعلومات ستستخدم لغاية البحث فقط وسيتم التعامل معها بغاية السرية، وقد أعطيت هذه الرسالة بناء على طلبها.

وتفضلوا بقبول فائق الاحترام

عميد كلية الدراسات العليا

د. نوار قطب



Page 1 of 1

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Appendix D Outcome measures



	رقم المشترك
	التاريخ
	الموقع

الحالة الصحية النفسية والتوازن الوظيفي لأمهات الأطفال
الفلسطينيين المصابين باضطراب طيف التوحد

استمارات الدراسة

وسام تمير طالبة ماجستير
الجامعة العربية الأمريكية - فلسطين

استبيان المعلومات الديموغرافية

هذا الاستبيان هو جزء من بحث يجري في الجامعة العربية الامريكية-فلسطين وسيستغرق منك حوالي 10 دقائق فقط. لن نقوم بالإفصاح عن شخصيتك لأي شخص أو جهة. سيساعدنا هذا البحث في كتابة توصيات لجهات مختلفة للارتقاء بمستوى الصحة النفسية والتوازن الوظيفي لأمهات الاطفال المصابين باضطراب طيف التوحد في فلسطين. قم بوضع إشارة X داخل الذي يمثل الإجابة المناسبة.

معلومات الطفل		
الجنس	1 ذكر <input type="checkbox"/>	2 أنثى <input type="checkbox"/>
العمر		
تاريخ التشخيص		
مكان تواجد الطفل	<input type="checkbox"/> 1 مدرسة لذوي الاحتياجات الخاصة <input type="checkbox"/> 2 مركز تأهيل <input type="checkbox"/> 3 في المنزل <input type="checkbox"/> 4 روضة <input type="checkbox"/> 5 مدرسة عادية	
معلومات الاهل		
عمر الام	العمر:.....سنة	
عمر الاب	العمر:.....سنة	
مكان السكن	<input type="checkbox"/> مدينة	<input type="checkbox"/> قرية <input type="checkbox"/> مخيم <input type="checkbox"/>
المستوى الاقتصادي	<input type="checkbox"/> مرتفع	<input type="checkbox"/> متوسط <input type="checkbox"/> متدني <input type="checkbox"/>
المستوى الأكاديمي للأُم	<input type="checkbox"/> 1 غير متعلم <input type="checkbox"/> 2 ابتدائي	<input type="checkbox"/> 4 ثانوي <input type="checkbox"/> 5 بكالوريوس

6 دراسات عليا <input type="checkbox"/>	3 اعدادي <input type="checkbox"/>	
4 ثانوي <input type="checkbox"/> 5 بكالوريوس <input type="checkbox"/> 6 دراسات عليا <input type="checkbox"/>	1 غير متعلم <input type="checkbox"/> 2 ابتدائي <input type="checkbox"/> 3 اعدادي <input type="checkbox"/>	المستوى الأكاديمي للاب
	1 أقارب درجة أولى <input type="checkbox"/> 2 أقارب بدرجة بعيدة <input type="checkbox"/> 3 غير أقارب <input type="checkbox"/>	درجة القرابة بين الزوجين
	.....	عدد الاخوة
	.....	عمل الاب
	.....	عمل الام
	1 الأب والأم يعيشان معا <input type="checkbox"/> 2 الأب والأم مطلقان <input type="checkbox"/> 3 الأم أرملة <input type="checkbox"/>	الحالة الاجتماعية للأهل

مقياس الاكتئاب والقلق والضغط

اقرأ كل من النصوص التالية ثم ضع دائرة حول الرقم ٠، ١، ٢ أو ٣ الذي يبين درجة انطباق هذا الشعور عليك في الأسبوع الماضي. لا يوجد إجابات صحيحة أو خاطئة. لا تقضي وقتاً طويلاً في أي منها.

استعمل التقديرات التالية:

- ٠ لا ينطبق عليّ بتاتاً
- ١ ينطبق عليّ بعض الشيء أو قليلاً من الأوقات
- ٢ ينطبق عليّ بدرجة ملحوظة أو بعض الأوقات
- ٣ ينطبق عليّ كثيراً جداً، أو معظم الأوقات

٣	٢	١	٠	وجدت صعوبة في الاسترخاء والراحة	١
٣	٢	١	٠	شعرت بجفاف في حلقي	٢
٣	٢	١	٠	لم يبدو لي أن بإمكانني الإحساس بمشاعر إيجابية على الإطلاق	٣
٣	٢	١	٠	شعرت بصعوبة في التنفس (شدة التنفس السريع، اللهثان بدون القيام بمجهود جسدي مثلاً)	٤
٣	٢	١	٠	وجدت صعوبة في أخذ المبادرة بعمل الأشياء	٥
٣	٢	١	٠	كنت أميل إلى ردة فعل مفرطة للظروف والأحداث	٦
٣	٢	١	٠	شعرت برجفة (باليدين مثلاً)	٧
٣	٢	١	٠	شعرت بأنني أستهلك الكثير في الطاقة العصبية (شعرت بأنني أستهلك الكثير من قدرتي على تحمل التوتر العصبي)	٨
٣	٢	١	٠	كنت خائفاً من مواقف قد أفقد فيها السيطرة على أعصابي وأسبب إحراجاً لنفسي	٩
٣	٢	١	٠	شعرت بأن ليس لدي أي شيء أتطلع إليه	١٠

٣٢	١	٠	شعرت بأنني مضطرب ومنزعج	١١
٣٢	١	٠	أجد صعوبة في الاسترخاء	١٢
٣٢	١	٠	شعرت بالحزن والغم	١٣
٣٢	١	٠	كنت لا أستطع تحمل أي شيء يحول بيني وبين ما أرغب في القيام به	١٤
٣٢	١	٠	شعرت بأنني على وشك الوقوع في حالة من الرعب المفاجئ بدون سبب	١٥
٣٢	١	٠	فقدت الشعور بالحماس لأي شيء	١٦
٣٢	١	٠	شعرت بأن قيمتي قليلة كشخص	١٧
٣٢	١	٠	شعرت بأنني أميل إلى الغيظ بسرعة	١٨
٣٢	١	٠	شعرت بضربات قلبي بدون مجهود جسدي (زيادة في معدل الدقات، أو غياب دقة قلب، مثلاً)	١٩
٣٢	١	٠	شعرت بالخوف بدون أي سبب وجيه	20
٣٢	١	٠	شعرت بأن الحياة ليس لها معنى	2١

استبيان توازن النشاطات المتنوعة في الحياة

يرجى الإشارة إلى مدى موافقتك على كل عبارة من العبارات التالية وذلك بوضع دائرة حول الرقم الذي يقع تحت الجواب المناسب.

1. في الأسبوع المعتاد أشعر أن هناك ما يكفي من أشياء للقيام بها.
غير موافق بشدة غير موافق أوافق بشدة أوافق

2. هناك توازن بين الأشياء التي أقوم بها لنفسى والأشياء التي أقوم بها للآخرين.
غير موافق بشدة غير موافق أوافق بشدة أوافق

3. أحرص على فعل الأشياء التي أرغب في فعلها.
غير موافق بشدة غير موافق أوافق بشدة أوافق

4. أوازن بين الأنشطة المختلفة في حياتي مثل العمل والأعمال المنزلية والترفيه والراحة والنوم.
غير موافق بشدة غير موافق أوافق بشدة أوافق

5. لدي ما يكفي من الوقت للقيام بالأشياء التي يجب علي القيام بها.
غير موافق بشدة غير موافق أوافق بشدة أوافق

6. أوازن بين أنشطتي البدنية والاجتماعية والفكرية وأوقات الراحة.
غير موافق بشدة غير موافق أوافق بشدة أوافق

7. أنا راضٍ عن مقدار الوقت الذي أقضيه في أنشطتي اليومية المختلفة.
غير موافق بشدة غير موافق أوافق بشدة أوافق

8. في الأسبوع المعتاد، أنا راضٍ عن عدد الأنشطة التي أشارك فيها.
غير موافق بشدة غير موافق أوافق بشدة أوافق

9. هناك تنوع كافٍ بين الأشياء التي يجب أن أقوم بها وتلك التي أريد القيام بها.

غير موافق بشدة غير موافق وافق بشدة وافق

10. هناك توازن بين الأنشطة التي تزودني بالطاقة في مقابل تلك التي تستنزف طاقتي.

غير موافق بشدة غير موافق وافق بشدة وافق

11. أنا راضٍ عن مقدار الوقت الذي أقضيه في الاسترخاء واستعادة قواي (استرداد نشاطي) والنوم.

غير موافق بشدة غير موافق وافق بشدة وافق

مقياس القدرة على الصمود المختصر

يرجى الإشارة إلى مدى موافقتك على كل عبارة من العبارات التالية وذلك بوضع دائرة حول الرقم الذي يقع تحت الجواب المناسب.

أقرب ل بشدة ة	أقيل	محايد	ارفض	ارفض بشدة	
5	4	3	2	1	1. أميل إلى استعادة توازني سريعاً بعد الأوقات الصعبة.
5	4	3	2	1	2. أجد صعوبة عندما أمر بأحداث ضاغطة.
5	4	3	2	1	3. لا أخذ وقت طويل لأتعاقد من الأحداث الضاغطة.
5	4	3	2	1	4. يصعب على أن استرجع وضعي سريعاً عندما تحدث أشياء سيئة.
5	4	3	2	1	5. عادة أمر خلال الأوقات الصعبة بصعوبة بسيطة.

6. أميل لأخذ وقت طويل للتغلب على النكسات التي

1 2 3 4 5

تمر بي في حياتي.

مقياس التأقلم المختصر (Brief COPE)

هذه البنود تتعلق مع الطرق التي كنت تستخدمها للتأقلم مع الضغوطات في حياتك. تحديداً أي مشاكل مرتبطة بصحتك بشكل عام في الأشهر القليلة الماضية. (إذا لم يكن لديك أي مشاكل صحية في الأشهر القليلة الماضية قم بتقييم العناصر بناءً على كيفية تعاملك مع أي ضغوطات في حياتك خلال الأشهر القليلة الماضية). كل بند يتعلق بطرق معينة للتأقلم. أريد أن أعرف إلى أي مدى كنت تفعل ما تحتويه هذه البنود. لا تجيب على أساس ما إذا كان يبدو أنها مفيدة أم لا ، فقط إذا كنت تفعل ذلك أم لا. حاول تقييم كل بند على حدة في عقلك. استعمل المقياس ادناه من 1 الي 4 لتقييم كل بند من البنود من خلال وضع دائرة حول الرقم المناسب.

أنا لم أفعل ذلك على	لقد فعلت	لقد كنت أفعل	ل
الإطلاق	هذا قليلا	هذا بشكل	ق
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1				
4	3	2	1	1. تحولت إلى العمل أو الأنشطة الأخرى لتصفية ذهني
4	3	2	1	2. ركزت جهودي على القيام بشيء حيال الوضع الذي انا فيها
4	3	2	1	3. كنت أقول لنفسي "هذا ليس حقيقيا".
4	3	2	1	4. حصلت على الدعم العاطفي من الآخرين
4	3	2	1	5. تخليت عن محاولة التعامل مع الموقف
4	3	2	1	6. اتخذت اجراءات في محاولة لجعل الوضع يبدو أفضل.
4	3	2	1	7. كنت ارفض أن اصدق أنه ما حدث قد حدث فعلا
4	3	2	1	8. قلت أشياء حتى اتخلص او اهرب من من المشاعر غير السارة المتعلقة بالحدث
4	3	2	1	9. حصلت على المساعدة والمشورة من أشخاص آخرين.
4	3	2	1	10. حاولت أن أرى الموقف في صورة مختلفة، لجعله يبدو أكثر إيجابية.
4	3	2	1	11. انتقدت نفسي.

4	3	2	1	12. حاولت الخروج باستراتيجية حول ما يجب القيام به.
4	3	2	1	13. حصلت على الراحة والتفهم من شخص ما.
4	3	2	1	14. تخلّيت عن محاولة التأقلم مع الموقف
4	3	2	1	15. بحثت عن شيء جيد في ما يحدث.
4	3	2	1	16. صنعت و قلت النكات حول هذا الموضوع.
4	3	2	1	17. فعلت أ شياء لاقبل من التفكير في الموقف، مثل الذهاب إلى السينما، ومشاهدة التلفزيون والقراءة وأحلام اليقظة، النوم، أو التسوق.
4	3	2	1	18. قبلت بواقع الحقيقة أنه حدث
4	3	2	1	19. عبرت عن مشاعري السلبية.

استبيان إدراك المرض (IPQ)

للأسئلة التالية، يرجى وضع دائرة حول الرقم الذي يتوافق بشكل أفضل مع وجهات نظركم

إلى أي حد يؤثر اضطراب طفلكم على حياتكم؟										
10	9	8	7	6	5	4	3	2	1	صفر
										لا يؤثر عليها أبد
										يؤثر عليها بشدة
كم تظنون أنّ اضطراب طفلكم سيدوم؟										
10	9	8	7	6	5	4	3	2	1	صفر
										لمدة قليلة جدا
										الى الابد
كيف تقيّمون سيطرتكم على اضطراب طفلكم؟										
10	9	8	7	6	5	4	3	2	1	صفر
										لا سيطرة على الاطلاق
										سيطرة هائلة
كم تظنون أن علاج اضطراب طفلكم يمكن أن يساعدكم؟										
10	9	8	7	6	5	4	3	2	1	صفر
										لا يساعدني على الاطلاق
										مفيد الى اقصى درجة
الى اي درجة تشعرون بعوارض اضطراب طفلكم؟										
10	9	8	7	6	5	4	3	2	1	صفر

عوارض حادة جدا	لا عوارض على الإطلاق
إلى أي حد يسبب لكم اضطراب طفلكم القلق؟	
10 9 8 7 6 5 4 3 2 1	صفر
قلق هائل	لا قلق على الإطلاق
كيف تقيّمون فهمكم لاضطراب طفلكم؟	
10 9 8 7 6 5 4 3 2 1	صفر
افهمه بوضوح فائق	لا افهمه على الإطلاق
لأيكم اضطراب طفلكم على الصعيد العاطفي؟ (مثلا يثير غضبكم، يخيفكم، يحزنكم أو يسبب لكم الاحباط ...)	
10 9 8 7 6 5 4 3 2 1	صفر
تأثر بدرجة هائلة	لى الإطلاق
يرجى منكم أن تذكروا، بترتيب الأهمية، الأسباب الثلاثة التي أدت (برأيكم) إلى اضطراب طفلكم. الأسباب الأكثر أهمية بالنسبة هي:	
1. _____	
2. _____	
3. _____	

الملخص

اضطراب طيف التوحد هو حالة عصبية تؤثر على أداء الشخص في الحياة ويواجه صعوبات في التفاعل مع الآخرين وغيرها من الصعوبات السلوكية والحسية وهناك حاجة إلى مزيد من الاهتمام وتقديم الرعاية للعائلات التي لديها أطفال مصابون باضطراب طيف التوحد بسبب الصعوبات والتحديات التي تواجههم والجهد الكبير الذي يحتاجونه للتعامل مع أطفالهم المصابين باضطراب طيف التوحد وخاصة الأمهات. تهدف هذه الدراسة إلى استكشاف العوامل المؤثرة في الصحة النفسية والتوازن الوظيفي لدى الأمهات الفلسطينيات لذين لديهم أطفال يعانون من اضطراب طيف التوحد وأجريت دراسة مقطعية من خلال مشاركة **94** أم فلسطينية لديهم أطفال مصابين باضطراب طيف التوحد من شمال فلسطين (جنين، نابلس، طولكرم)؛ وقد تم استخدام أدوات تقييم وهي مقياس الاكتئاب والقلق والتوتر ومقياس التوازن الوظيفي.

وتم إجراء تحليل البيانات باستخدام برنامج التحليل الإحصائي الإصدار **26** وظهرت النتائج ما يقرب من ثلث (**31.9%**) من الأمهات تعاني من مستوى شديد من الاكتئاب و(**39.4%**) تعاني من مستوى شديد من القلق؛ بالإضافة إلى **60.6%** أفادوا بعدم التوازن الوظيفي. وبناء على هذه النتائج تحتاج الأمهات اللواتي لديهن أطفال مصابين باضطراب طيف التوحد إلى تعزيز الصحة النفسية والتوازن الوظيفي بالإضافة إلى دراسة المزيد من العوامل المؤثرة على الصحة النفسية والتوازن الوظيفي للأمهات بالإضافة إلى التطرق للمزيد من الأبحاث العلمية التي تشمل هؤلاء الأمهات.