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Healthy Development and Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study

Dissertation

Submitted to Council of Nursing College, University of Babylon

By

Zahraa Ali Kadhum

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Academic Supervised by

Professor Dr. Nuhad Mohammed AL-Doori

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بسم الله الرحمن الرحيم

(الَّذِينَ آمَنُوا وَتَطْمَئِنُّ قُلُوبُهُم بِذِكْرِ اللَّهِ ۗ أَلَا بِذِكْرِ اللَّهِ تَطْمَئِنُّ الْقُلُوبُ)

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Certification

We, members of the examining Committee, certify that the Dissertation which entitled " **Healthy Development and Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study**" submitted by the student Zahraa Ali Kadhum, and we have examined the student, in its contents, and what is related to it , so we decide that it is adequate for awarding the degree of doctorate of philosophy in nursing with specialty of Pediatric Nursing.

Signature
Prof Dr. Khatam Mtashur Hataab
Member
Date / / 2023

Signature
Prof Dr. Abdul Mahdi A. Hasan
Member
Date / / 2023

Signature
A.Profe. Dr. Hiba Jasim Hamza
Member
Date / / 2023

Signature
A.Prof.Dr. Wafaa Ahmed Ameen
Member
Date / / 2023

Signature
Prof. Dr. Amean A.Yasir
Chairman
Date / / 2023

Approved by the Council of the College of Nursing

Signature
Name: Dr. Amean A.Yasir
Professor
Dean of the College of Nursing, University of Babylon
Date / / 2023

Academic Supervisor Certification

This dissertation which entitled" **Healthy Development and Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study** " was prepared under my supervision at the collage of Nursing, University of Babylon as a partial fulfillment of the requirements for degree of doctorate philosophy in nursing.

Signature

Dr. Nuhad Mohammed AL-Doori

Professor PhD

Academic Advisor

College of Nursing

University of Babylon

Date: / /2023

Signature

A. Professor. Dr. Wafaa Ahmed Ameen

Head of Pediatric Nursing Department

College of Nursing

University of Babylon

Date / / 2023

Dedication

I dedicate this work for:

Dear father for his kindness, wisdom and continuous support.

Dear mother for her patience, generosity, and always believing in me.

My Brothers and sisters.

To my husband and children.

For everyone who help me.

Researcher

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Great thanks for Allah the most merciful the compassionate.

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Researcher

Abstract

Background: Early life events can exert a powerful influence on both the pattern of brain architecture and behavioral development. Much of the attention is focused on early experience the impact of child mental health on child development and society as a whole is well documented but under recognized. The public has limited awareness of how mental health affects child development and societal wellbeing in general, how important mental health needs can and should be met, and the scientific basis for promoting mental health and preventing and treating disorders.

Objectives of the study: The study aims to find out the comparative between healthy development and autistic spectrum disorders in children related to their mothers' experiences in early childhood.

Study design: " Quantitative – descriptive cross-sectional design " is selected to confirm objectives of the research: Healthy Development & Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study through the period December 2021 to March 2023.

Setting of the study: The study was conducted in Babylon province at AL-Hillah city, which included kindergartens and autism centers.

Sampling: Purposive - non-probability sample was selected to carry out the study objectives which consist of (138) mothers who have children in Kindergartens and (133) mothers who have children with ASD in AL-Hillah city.

Methodology: Collecting data through adopted tool from extensive literature review, the questionnaire of the study consists five parts. The Validation

achieved by distribution of the questionnaire to (18) expert, while reliability calculated as (0.93) out of (0.70) which is statistically acceptable.

Results: Most healthy children 64 (46.4%) at 5 years old, while 52 (39.1%) of autistic spectrum disorder children at 6 years old. 74 (53.6%), 94 (70.7%) were male gender. 63 (45.7%) healthy children were breastfed, while most of the autistic spectrum disorder children recorded artificial feeding at 47 (35.3%). Highly significant differences between their responses to comparison between mother's experience related to their children of both group (healthy and ASD) toward cognitive, emotions, social and motor achievement.

Conclusions: The overall assessment for mothers' experience of healthy children were good, while mothers' experiences of autistic spectrum disorder children were poor related to mothers' experiences about cognitive, emotional, social, and motor achievement. The comparison between mother's experiences related to their children of both group (healthy and ASD) shows highly significant differences between the responses toward cognitive, social motor and emotional Achievements

Recommendations: The study recommends to develop the centers that specialized in ASD as well as need for educating and training mothers in early detection and management of children with autistic spectrum disorder.

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List of Abbreviations and Symbols

Abbreviations	Meaning
%	Percentage
ABA	Applied Behavior Analysis
ABC	Autism Behavior Checklist
ADDMN	Autism and Developmental Disabilities Monitoring Network
AS	Asperger's syndrome
ASD	Autistic spectrum disorder
ASIEP-3	Autism Screening Instrument for Educational Planning—3rd Version

ASQ	Autism Screening Questionnaire
ASS	Assessment
ASTN2	Astrotactin 2
CARS	Childhood Autism Rating Scale
CDC	Centers for Disease Control and Prevention
CDD	Childhood disintegrative disorder
CHAT	The Checklist for Autism in Toddlers
CNTNAP3	Contactin Associated Protein Family Member 3
d.f	Degree of Freedom
DTT	Discrete Trial Training
EEG	Electroencephalography
ESAT	Early Screening for Autistic Traits
FDA	Food and Drug Administration
H. S	Highly Significant
HD	Healthy Development
ICT	Infant Toddler Check List
IQs	Intelligence Quotients
M-CHAT	The Modified Checklist for Autism in Toddlers
MMR	Measles, Mumps, and Rubella
MMWR	The Morbidity and Mortality Weekly Report
MRI	Magnetic Resonance Imaging
MS	Mean of Score
NASEM	National Academies of Sciences, Engineering, and Medicine
N. S	Non-Significant
No	Number
OXTR	Oxytocin Receptor
PDD-NOS	Pervasive Developmental Disorder – Not Otherwise Specified
PDDST	Pervasive Developmental Disorders Screening Test
P-value	Probability Value

Q-CHAT	Quantitative Checklist for Autism in Toddlers
RDI	Relationship Development Intervention
S	Significant
SPSS	Statistical Package for the Social Science
STAT	Screening Tool for Autism in Two-Year-Old's
Std	Standard Deviation
Std. E	Standard Error
TEACCH	Treatment and Education of Autistic and Related Communication Handicapped Children
UAE	United Arab Emirates
USA	United states America
WHO	World Health Organization

Chapter One

Introduction

Chapter One

Introduction

1.1. Introduction

Mothers are the first social institution concerned with the care of the child and meeting a needs; it also helps to form his personal and social structure as well as developing his mental, emotional, spiritual and muscular abilities and helps him to build abilities and characteristics, and mother is the primary unit in which the child lives and has become important (Wong *et al*., 2015).

Mothers responsibilities become more complex because of their burdens and the multiplicity of those roles, especially with the increase in the number of children needs to satisfy basic needs, provided with successful methods of interaction that compatibility with life (Ahmed and Al-Halabi, 2015).

Childhood experiences are deeply rooted in the personality of the individual because he is still being that can be molded and refined, and therefore this stage should be given special attention. In particular, providing a healthy environment for the child and providing the necessary psychological care for him and work to satisfy his needs and protect him from stress, anxiety, fear, jealousy and anger feeling insecure and treating it well on the basis of deep understanding his motives, his emotions and his feelings (Rayan and Ahmad, 2016).

Childhood is the most important stage in a person's life in which a personality is built with all its features and traits. The social upbringing that a person receives begins to acquire a certain pattern of behavior, a person passes this stage well, in peace, but if the opposite happens, child may face many

childhood problems whose effects extend to adolescence. A problem that causes the child to have many first problems are learning difficulties in addition to the health problems; excessive motor activity accompanied by impulsive behavior difficult situations or dangerous without thinking (American psychological Association, 2013).

In comparison to mothers of healthy development (HD) children and mothers of children with other disabilities, report elevated stress levels and they are at an increased risk for depression (Bright *et al*., 2016).

Only lately has study concentrated on the experiences of mothers who have a child with Autistic spectrum disorder (ASD) who stated the rising participation of mothers in their child's early intervention, it seems crucial, however, to comprehend what it is like to be the mother of a child with ASD. However, depression and stress symptoms may hinder a mother's capacity to participate in child intervention (Fox *et al*., 2010).

Mothers are not the only ones who are impacted by having a child with ASD; the whole family is at risk. A lack of spontaneity or flexibility in family life, problems maintaining employment or pursuing social activities, giving up regular family activities and outings, stress surrounding the marital relationship, and a lack of personal social activities are all indicators of family functioning impairments, according to previous research on mothers' experiences with children with ASD (Hinojosa *et al*., 2012).

In order to optimize intervention success, many of authors propose assessing the mother's well-being before to initiating any parenting intervention and addressing stress and depression symptoms. Stress and depression symptoms may impede a mother's capacity to participate in therapies for her child if they persist. A child with ASD not only affects the

mother, but also presents a danger to the family's wellbeing (American phycological association 2013).

Autistic spectrum disorder (ASD) is a childhood condition that imposes a significant burden on the affected child, his or her family, and other caregivers. The condition may manifest as early as two to three years of age or as late as seven years of age, but the diagnosis will not be confirmed until six to nine years of age. The disease is characterized by a significant behavioral disruption that interferes with the child's daily activities performance (psychomotor agitation, lack of attention, and impulsivity), and the onset of these symptoms is often early in life. As these symptoms grow more pronounced with age, mothers are unsure about how to handle their children, particularly when they begin school (Catalano *et al*., 2018) .

Autistic spectrum disorder (ASD) has a substantial influence on a child's development, including cognitive functioning, emotional and social. It is also the cause of a great amount of morbidity and dysfunction for the child, peer group, and their parents. A child who is affected by this condition is often subjected to years of unfavorable feedback about their conduct, and they typically have scholastic and societal disadvantages as a result. It is predicted that as many as two thirds of children who suffer from hyperactivity disorders will continue to struggle with the condition throughout adulthood. In addition to this, there may be a significant impact on the lives of the family. The accumulated consequences of these challenges may be overpowering and produce considerable burdens of sickness linked with ASD. This is made clear in the diminished quality of life experienced by patients and the family of those patients. Because of this load, the stakeholders in managed care should give it some thought and take some action in order to encourage good practice and excellent treatment (Dardas and Ahmad, 2015) .

Families of ASD children may face obstacles that extend beyond the symptoms of ASD. As mothers often play a pivotal role in attempting to alter their children's behavioral symptoms, which is crucial to understand the difficulties that mothers are facing when considering intervention (e.g. through parent training and behavior therapy programs). Understanding varied home circumstances and their influence on the developmental trajectories of children with ASD is thus essential for the efficacy of these therapies (American psychological Association, 2013) .

In addition, children with ASD need guidance and understanding from their mothers to reach their full potential and to succeed in life, particularly providing a care plan for dealing of child with hyperactivity, impulsivity, and inattention (Chiang, and Wineman, 2014).

Rayan and Ahmad (2016) mention that ASD is a complex developmental disorder effect on quality of life which consider as an indicator to help mothers understand the condition of a child with ASD disorder and the difficulties faced by mothers, and it serves as a measuring tool for intervention programs for mothers by receiving psychological support, moral and the material (Rayan and Ahmad, 2016).

Autistic spectrum disorder represents an overlapping and complex developmental disability, represents a disturbance in thinking, cognition, social interaction, verbal and nonverbal communication, and self-care skills. Also, the main cause of this disorder is undetermined, although some refer to it for multiple overlapping reasons, which constitutes an obstacle in the process of diagnosing ASD (Chiang, and Wineman, 2014).

According to the Diagnostic and Statistical Manual of Mental and Mental disorders issued by the American Psychiatric Association, fifth edition, DSM-5, the main symptom of ASD is inattention, alteration in social

interaction, social communication, hyperactivity, impulsivity, and verbal impairment with repetitive, restricted and stereotype behavioral patterns where the child's behavior is inappropriate or appropriate with the level of development (Unlu *et al*., 2018)

Autistic spectrum disorder child is those who always shows high levels of activity even in situations that do not require it, or even when it becomes inappropriate or inappropriate for the situation, and this child is always unable to reduce - inhibition - this high level of activity. Activity when he receives the command to do so, and his responses always appear at the same speed, in addition to that it is characterized by some physiological characteristics, learning problems, behavioral symptoms and special problems (Feinberg *et al*., 2014).

Most of the ASD children are easily agitated, and they have sharp tantrums and sudden mood swings. They are also quick to irritate, especially if they are exposed to frustrating situations. They do not bear frustration and unexpected angry reactions are issued from them. It has been observed that these children appear dissatisfied and look at themselves Passive, their emotions are always unstable and their self-concept is low (Zablotsky *et al*., 2013)

The Morbidity and Mortality Weekly Report (MMWR) states that ASDs continue to be a major concern for public health in the United States (USA) (Lonnie Zwaigenbaum *et al*.,2019).

World Health Organization (WHO, 2019) stated that individuals with autism are often subjected to discrimination or stigma, including unequal excommunication of health, opportunities for involvement, education and participation in their communities.

There is no exact cause of ASD but genes can interact with environmental influences to impact development in a way that may contribute to autism. Certain factors increase the availability of developing autism includes: having a sibling (sister or brother) with autism, having a parent with autism, having assured genetic conditions (fragile X syndrome, Down syndrome) and very low birth weight (Simonstein and Mashiach-Eizenberg, 2016).

Early signs of ASD can be detected earlier in children in age (6-18) months old, when a child fixes objects or doesn't react to his parents or people. Toddlers and older babies may be not reacted to the names, avoiding of eye contact, lose mutual attention or repetitive movements like arm flapping or rocking. Child may play with the toys abnormally, such as lining the toy up or concentrating on a part of it more than the whole. If parents or caregiver see these signs, they must be contact the pediatricians or psychologist to make a developmental screening (Techasaensiri., *et al.*, 2011).

The American Academy of Pediatrics recommends the routinely checkup of all children for ASD as a part of well-child examinations for (18-24) months. International opinion prefers early diagnosis of ASD as this enables the child to receive early management to achieve their developmental milestone (Samadi and McConkey, 2015).

Autistic spectrum disorder diagnosis is often made later after the third year of life when the affected child was expected to enter the kindergarten; with extraordinary early identification in severe cases which could be easily picked and diagnosed. Despite the efforts to raise awareness of early signs of ASD and encourage early detection, as well as some recent trends in younger children's diagnosis, the mean age of detection in the USA remains around (4-5) years (Eltyeb, 2017) (Lonnie Zwaigenbaum, *et al*., 2019).

Early treatment for ASD will minimize challenges for children by encouraging them to learn new skills and improve their strengths. No single best medication or treatment for ASD, but it is important to work closely with a specialist or health care provider to find the right treatment program. A child with ASD should be referred to specialists who are trained in delivering behavioral, social, skill-building or educational programs. Such services will help autistic children to learn the life skills needed to be independent with life, minimize difficult behaviors improving social skills, communication skills and vocabulary. A specialist may be using drugs to treat those symptoms accompanied with autism (Mcpheeters *et al*., 2016).

Psychosocial interventions like training programs of mother's skills and behavioral treatment, can minimize disabilities with social behavior and communication and produce a positive effect in the life quality for autistic children and their families (WHO., 2019).

Mothers play an important role in treatment of children with ASD, at the same time, it can be the risk factor for its symptom's occurrence. Their motivation level needs to be maintained by regular upgrading her information and skills sharpening to cope with children in difficult situations. Knowledge and attitude of preschool mothering concerning ASD are very important factors for the promotion of children's health and well-being (Chandran, Jayanthi *et al*., 2019)

1.2. Importance of the study:

Autistic spectrum disorder is a sign that last for a lifetime which exit in (4-5) times more frequent among males than females, which leads to the assumption that genetics can play an important role, as well as it found among all groups (ethnic, racial and socioeconomic) (Drusch, 2015).

Autistic spectrum disorder become a serious health concern as long as increased prevalence in developed countries: (United Arab Emirates (UAE) 29 per 10,000; USA 21.6 per 10,000; Bahrain 4.3 per 10,000; Oman 1.4 per 10,000; China 11.6 per 10,000; Europe 18.75 per 10,000) means that resources are required to identify the associated risk factors and determine prevalence and preventive measures. (Knopf, A. 2018).

Centers for Disease Control and Prevention (CDC) reported in 2014: prevalence of autism has raised dramatically from 1 per 250 child, to 1 per 59 children in 2014 (Table 1.1). This apparent increase can be explained in many ways, including increased understanding, extension of diagnostic criteria, better screening tools, and increased reporting (Chiarotti, F., & Venerosi, A. 2020).

Table 1.1: The worldwide prevalence of ASD in 8-year old.

Year	Date of birth	Prevalence per 1000 child (range)	About 1 in X children
2000	1992	6.5 (4.5-9.9)	1 in 166
2002	1994	6.7 (3.3-10.6)	1 in 150
2004	1996	8.0 (4.6-9.8)	1 in 125
2006	1998	9.0 (4.2-12.1)	1 in 110
2008	2000	11.3 (4.8-21.2)	1 in 88
2010	2002	14.7 (5.7-21.9)	1 in 68
2012	2004	14.6 (8.2-24.6)	1 in 68
2014	2006	16.8 (13.1-29.3)	1 in 59

The frequency of ASD per 1,000 8-year-old children varied from 16.5 to 38.9. In children aged 8 years, 5 the incidence of ASD was 23.0 per 1,000 (one in 44), and ASD was 4.2 times more common in boys than in girls. However, American Indian/Alaska Native children exhibited greater ASD

incidence than non-Hispanic White (White) children. Overall, ASD prevalence was comparable across racial and ethnic groups (table 1.2). At some places, the prevalence of ASD was lower among Hispanic children than among White and non-Hispanic Black (Black) children. The relationships between neighborhood-level median household and ASD prevalence (Chiang and Wineman. 2014).

Table 1.2: Distribution of ASD by gender, race, and ethnicity world widely.

		Prevalence	Percent	About 1 in every X Children
	Overall	16.8 per 1,000	1.7%	1 in 59
Sex	Boy	26.8 per 1,000	2.7%	1 in 38
	Girls	6.6 per 1,000	0.7 %	1 in 152
Race/ Ethnicity	White	17.2 per 1,000	1.7 %	1 in 58
	Black	16.0 per 1,000	1.6 %	1 in 83
	Asian / pacific islander	13.5 per 1,00	1.4 %	1 in 74
	Hispanic	14.0 per 1,000	1.4 %	1 in 71

Based on cognitive ability statistics, children with ASD were classed as intelligent. Black, Hispanic, and White youngsters, in descending order, had the highest proportions of ASD patients with IQs 70. Overall, children with Autism spectrum disorder and IQ scores 70 were diagnosed at a younger median age than those with ASD and IQ scores >70. (44 versus 53 months) (Dardas and Ahmad, 2015).

Multiple researches have displayed that parents of children with autism spectrum disorder (ASD) report significant levels of psychological discomfort as well as concerns with their physical health. Parents of children

with autism spectrum disorders (ASD) report experiencing increased levels of stress, with mothers often exhibiting greater indicators of depression than fathers (Zablotsky *et al*., 2013)

Raising a child with autism spectrum disorder (ASD) is uniquely challenging to mother. The children's restricted social, communicative and emotional competencies, their uneven cognitive development, and their maladaptive behavior place tremendous stress on mother of children with ASD (Kim and Suh, 2016).

Mother has a large and effective role in the progress and development of the skills of autistic child, the child spends most of the time at home, therefor preparing the right environment at home represent the main factor in caring as a basis for treating him and modifying his behavior, and then he learns skills self-care skills that help him acquire many other skills. This requires involvement mother in programs that provide information about her child, the services provided to him, the methods of communicating with him, and training on them (American psychological Association, 2013).

1.3. Problem Statements :

Autistic spectrum disorder is the most often diagnosed childhood condition, according to a large body of research. There are significant discrepancies in the understanding of mothers of children with Autism spectrum disorder. The emphasis of research has been on children with ASD, whereas less attention has been paid to the experience of mothers parenting a child with ASD (Ridderinkhof *et al*., 2018).

The desire to learn more about mothers' experiences, who have the greatest daily contact with their child with ASD, and the meanings they ascribe to those experiences, may be included in the issue statement for a phenomenological investigation. The research's conclusions will aid in

addressing the issue of caring for ASD children at home, and this will also reflect mothers' awareness of the management strategies that should be used to control the ASD child's behavioral disturbances and to gather data about the child's presentation in order to create a care plan (Rutherford *et al*., 2020).

The aim of the present study is to determine the mother experience in early childhood and impact of healthy development and autistic spectrum disorder in AL-Hillah city: A comparative study.

1.4. Objectives of the study:

The objectives of the current study are:

1. To determining the mothers Experiences in Early Childhood of Healthy Child and child of Autistics Spectrum Disorders.
2. To comparing between mothers' experiences of healthy child and Autistics Spectrum Disorders
3. To finding out the correlation between mother's experiences of healthy child and Autistics Spectrum Disorders
4. To identifying the relationship between mothers' experiences of healthy child and the socio-demographic characteristics and identify the relationship between mothers' experiences of Autistics Spectrum Disorders and the socio-demographic characteristics.

1.5. Definition of Terms :-

1.6.1. Dependent variable: Healthy development, Autistic spectrum disorder.

1.6.2. Independent variables: Mother experience.

1.6.3. Healthy development

Theoretical definition:

Healthy development refers to a process that encompasses physical, mental, emotional and social well-being. It includes age-appropriate development outcomes, such as motor, language, social, emotional and cognitive skills and abilities (Centers for Disease Control and Prevention, 2012).

Operational definition:

Healthy development means that children of all abilities, including those with special health care needs, are able to grow up where their social, emotional, cognitive, and educational needs are met.

1.6.4. Autism spectrum disorder (ASD)

Theoretical definition:

Is a neurological and developmental disorder that affects how child interact with others, communicate, learn, and behave. Although autism can be diagnosed at any age, it is described as a developmental disorder because symptoms generally appear in the first two years of life (Wong *et al*., 2015).

Operational definition:

Defined as severe and continuous bodily and motor activity accompanied by the inability to focus and pay attention in a way that makes the child unable to control his behaviors and accomplish tasks.

1.6.5. Early childhood

Theoretical definition:

Comprises a number of life stages, marked by developmental milestones. the researchers define early childhood as the period from birth to

age six, although they also recognize the importance of quality prenatal care in early childhood outcomes (Wong *et al*., 2015).

Operational definition:

Is the period between birth and six years of age, wherein a child's brain is highly sensitive to the environment around them.

1.6.6 .Comparative study

Theoretical definition:

Is a research methodology in the social sciences that aims to make comparisons two or more things with a view to discovering something about being compared across different countries, cultures, society or families (Coccia and Benati, 2018).

Operational definition:

Comparative studies aim to find out whether group differences in Health system adoption make a difference in important outcomes.

Chapter Two

Literature Review

Chapter Two

This chapter presents a review of literature and studies appropriate to the phenomenon essential to the present study.

2.1. Healthy Development

Healthcare professionals need to understand and learn about two areas related to human growth and development: first is knowledge of milestone competencies, for example, growth in the motor, cognitive, speech-language, and social-emotional domains, and second the eco-biological model of development, specifically, the interaction of environment and biology and their influence on development. Social-emotional development covers two important concepts of development including the development of self or temperament and relationship to others or attachment. (Shonkoff, 2016).

2.1.1. Temperament

The child's orientation to the world and how he interacts with it is determined by his temperament, which has nine components: regularity, sensory threshold, distractibility, activity level, emotional intensity, inclination to approach or retreat, perseverance, mood quality, and adaptability. may be characterized as a child's personality or style, and it is innate to them. It affects a child's conduct and social interactions. Studies have divided young children's temperament into three general temperamental groups based on the aforementioned characteristics that determine temperament (Boyce. 2014).

The energetic or feisty, who do not adhere to routines and have irregular eating and sleeping habits, have strong responses, and become

quickly agitated, while the slow to warm up kid feature may retreat or have a negative reaction. Easy or flexible adapt to changes, and have a calm demeanor. On the basis of this, carers may modify their management and caregiving approaches to suit the temperament of the kid. This may make it easier for the youngster to engage successfully with their surroundings, as indicated by quality of fit (Boyce. 2014).

2.1.2. Attachment

Mother-child bonding is the first step in a child's social-emotional development since it enables the mother to comfort her baby and quickly react to the child's demands. The newborn develops basic trust and confidence in the mother throughout the first year of life as a consequence of the mother's constant availability. This promotes attachment, which enables the baby to look for its mother during stressful situations (Duschinsky, 2018)

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Mother's sensitive and accessible supporting role are crucial to establishing attachment and the skill set that follows in healthy infants, whose social-emotional phases develop on an anticipated trajectory. Fear, pleasure, and anger are three unique emotions that are present from birth and can be seen in everyone's facial expressions. At this point, emotional reaction does not need cognitive input (Petrovska, *et al.*, 2013)

Issues with impulse control, gender roles, and peer relationships start to show themselves from 30 to 54 months. Preschoolers' ability to identify their values and develop flexible self-control is greatly influenced by their mothers. It is normal for people to test the boundaries of what is appropriate conduct and how much liberty they may exercise. The development of a child's feeling of initiative and the reduction of anxiety brought on by guilt or a loss of control may both be achieved by thoughtful mothering that strikes a balance between establishing boundaries and providing options (Borzekowski, *et al.*, 2011)

At three years old, the child begins to demonstrate pretend play abilities and exhibits symbolic play by using an item to represent something else, such as imagining a block is a phone or using a bottle to feed a doll. Themes and narratives provide complexity to the play settings. By the age of 3, the child is more engaging in play, has learned to control his hostility, and is developing cooperation and sharing abilities. They may play with one or two classmates, taking turns and pursuing common objectives. Role-playing abilities and imaginative play begin with pretending to be a cat. However, since the youngster is still learning to differentiate between fact and fantasy, it is usual for them to experience fear of the fantastic (Thompson, R. A. 2014)

Around the age of 4, children are able to distinguish between the actual and the imagined. They delight in performing pranks on others but fear being duped themselves. Imaginative situations and play skills are increasing in complexity. They can play with three to four friends using increasingly complicated themes and pretending abilities (Shonkoff, J. P. 2016).

The youngster can comply with basic rules and instructions at the ages of 5 and 6. Giving compliments and making amends for inadvertent errors are

among the adult social skills they acquire. They like socializing and relating to a group of friends better when they are in peer groups. The complexity of his imaginative play increases, and he enjoys dressing up and acting out his thoughts (Borzekowski, *et al*., 2011)

It may be possible to learn more about the susceptibility of the developing brain to the effects of genetic, epigenetic, and cultural influences in children with Autism spectrum disorder by examining the developmental trajectory of multiple systems (motor, intellectual, cultural, and language) in the first years of life in children with and without ASD. Active processes of neural synaptic plasticity, which include the insertion and pruning of synapses as well as changes to their strength or effectiveness, and connection, must be established for normal development to take place (Borghi & Vignoli 2019).

The age at which ASD symptoms show up may tell us something about how ready the brain is to handle the demands of such active neuronal processes. If genes or the environment (or both) mess up normal synaptic plasticity mechanisms, it could make it harder for the brain to connect neurobiological processes with other mechanisms of adaptation and learning. This could affect the likelihood of regression, the extent or intensity of disorder, and the prognosis. (Eubanks 2019).

2.2. Effective mothers experience

Mother may take several various forms, which suggests that certain good mothering experiences are effective in a variety of families and environments when giving children the attention they need for a happy, healthy life as well as for healthy growth and development. According to a recent study that examined the scientific literature for evidence of what works, mothers may assist their children's healthy development in the following

significant ways: affable and sensitive behavior, Predictable responses to youngsters, Routines and guidelines for the home chatting with children and sharing books, using appropriate punishment without being harsh, promoting health and safety. Mothers who make advantage of these opportunities may assist their children in maintaining good social, emotional, behavioral, and cognitive health and safety (Barkley 2013).

2.3. Supporting mothers of Children Ages 3-7 years

In addition to other caregivers who function as parents, mothers are among the most significant persons in the lives of young children. Since birth, children depend on their moms to provide the necessary care for their happiness, health, and proper development. But occasionally women lack the knowledge and support necessary for effective mothering (Barrett & Fleming 2011)

The National Academies of Sciences, Engineering, and Medicine (NASEM) were tasked with reviewing published data on mothers at the request of the Centers for Disease Control and Prevention (CDC) and other governmental organizations. The NASEM recently published a study on what they learned about good mothering practices and the most effective ways to assist them. The primary goal of research was to better understand how mothers see the effects of raising a young child with ASD on their personal and familial lives (Centers for Disease Control and Prevention 2014).

One of the conditions that is being overemphasized, publicized, and researched is autistic spectrum disorder (ASD). After intellectual impairment, it is the second-largest developmental disability class, and its prevalence has been rapidly rising (Zwaigenbaum *et al.*, 2019).

Autistic Spectrum Disorder is distinguished as a developmental impairment marked by difficulties in social and communicational abilities, restricted interest, and repetitive movements, despite the fact that it has several diverse classifications. Compared to their classmates, children with ASD show deficits in numerous areas, including social skills, language and speech, play skills, academic capabilities, and many more. Depending on the severity of their autism symptoms, these youngsters do poorly in school and a variety of social settings compared to their classmates. To lessen their difficulties, children with ASD must get early intervention treatments on a regular and systematic basis (Mary & Townsend 2015).

The area of therapies and interventions that will be utilized to minimize the limitations of children with ASD is rife with misunderstanding. It is essential that the therapies used to teaching children with ASD the necessary abilities be supported by empirical data (Charman 2014).

One of the therapies advised for use while dealing with ASD children is discrete trial training (DTT), which is involved in all categories of evidence-based practices carried out by various organizations and institutions (Meadan et al. 2009) (Wilczynski & Pollack 2009).

Evidence-based treatments, like the DTT, are often restricted to clinical therapies carried out in academic settings. It is challenging and costly to ensure that these interventions are made available to many moms via community-based models. Due to lengthy waiting lists, many children are unable to obtain evidence-based training techniques like the DTT at the appropriate age or do so later than necessary (Sturmey & Filtzer 2007).

Considering that children with ASD are supposed to get 25 to 40 hours of instruction each week, there is a substantial difference between the current

situation and the suggested scenario. Mothers who are working to change the situation are battling to increase the number of hours per week that ASD children get instruction by spending their own money (*Elder et al*., 2011).

It may be said that mothers of ASD children who actively engage in their training processes increase their children's weekly hours training and narrow the discrepancy between the optimum weekly hours training and the actual situation. The majority of training programs designed for children with ASD are expensive and don't adequately involve mothers, a crucial part of the earlier detection of children with ASD (Thomson *et al.*, 2009).

Participation of the mother in the child's training program and their active roles in the process are very important in many aspects and contribute to child's development. One of the most important ways of including the mothers in training programs is to ensure that they recognize and partly practice the program in which their children are involved. Many behavioral interventions focus on mother training as an aspect of expanded service range. mother training programs generally aim to teach mothers strategies to be used in natural environment (Love *et al.*, 2009)

A widely accepted belief is that children with ASD exhibit one of two primary patterns of symptom onset. One pattern consists of an early course of relatively normal development or minor delays, followed by a loss of language or social skills (or both) and the appearance of ASD-related atypical behaviors. The other is characterized by early development of impaired and ASD symptoms without reversal. There are contradictory findings about the prognostic significance of regression. Some studies suggest that regression is related with worse results, whereas others find no difference in outcomes between children with ASD who experience regression or do not (Choi 2019).

Two basic techniques, retrospective and prospective, have been employed to comprehend the genesis of aberrant development in children with ASD. Prior to the diagnosis of ASD, retrospective studies rely mostly on evidence from medical record reviews, parent memory, or systematic observational coding of home videotapes made during the first or second year of life (Love *et al.,* 2009)

The developmental status of children with ASD prior to the commencement of regression, which typically occurs from 18 to 24 months, has been controversially studied in retrospective research. According to (Luyster., *et al.,* 2005), social development in 12-month-olds with regressive autism was equivalent to that of 12-month-olds with standard development, and the development of complex babble and first words was accelerated in these children compared to those with usual development .In contrast, (Landa *et al.,* 2013) found that children with regressive autism had later first words than children with usual development.

Prospective, long-term studies of infants subsequently diagnosed with ASD provide a powerful way to define developmental trends while minimizing potential confounders like recollection bias. Five published prospective researches have given longitudinal data for children with and without ASD before their third birthday. These studies suggest that at 6 months of age, development in the motor, cognitive, linguistic, and social domains seem to be mostly intact, with a development slowdown that is discernible on objective developmental measures around the time of the child's first birthday. By preschool age, motor deficits are common in kids with ASD. In order to get further understanding of onset patterns, two primary onset groups for ASD were identified: (a) ASD manifestation around the time of the first birthday, and (b) ASD manifestation later but still before the third

birthday. With larger sample numbers and concurrent evaluations of linguistic, social, motor, and cognitive functioning in the first three years of life, we further evaluate the trajectories and short-term outcomes of early and later ASD manifesting groups in the current research. The time of departure from usual development within and across developmental systems, the pattern of altered trajectory (such as slowdown, plateauing, and skill loss), and the short-term prognosis are all addressed in this way (Mary & Townsend 2014) (Minjarez *et al.*, 2011).

2.4. Historical view of autism:

Although the first historical beginnings of autism go back to the psychiatrist Leo Kanner in 1943, this does not necessarily mean that this disorder did not exist or that there were no children with autism before that period. In 1799, the French doctor Itard studied the case of the 12-year-old boy Victor, who was found near the forest of Avon in France, and called him, Wild Boy of Avron, and his descriptions largely coincide with the symptoms of autism (Henninger, *et al.*, 2013).

In 1867, psychiatrist Henry Maudsly drew attention to a group of young children, and they were suffering from a severe mental disorder that resulted in Deviation and delay in developmental processes, and he initially considered them psychoses. In 1911, the Swedish physician Bleuler used the term autism to describe socially withdrawn adult patients, and described the abnormal autistic thinking style as autistic thinking. (Greydanu, *et al*., 2012).

However, autism has received wide attention from researchers since Kannur referred to it in 1943 his research when he examined groups of mentally retarded children at Harvard University in the United States United States of America, and these cases were characterized by a very early onset

of the disorder characterized by inability I have to communicate with others, complete self-isolation, extreme isolation and introversion, insistence It is based on routine and monotony, in addition to difficulties with language, and Kannur called it early infantile autism. (Tuchman, *et al.*, 2010).

In 1944, the Austrian doctor Asperger discovered a group of Austrian children have traits that are very similar to those of the Kannur children, He called it Asperger's Disorder, and in 1952 Mahler used the term Infantile autism, despite Kannur's autism taking characteristics of afflicted children The diagnosis of autism is accurate, but it did not appear in the first and second editions of the Diagnostic Manual of Disorders mentality in the years (1952, 1968), when it appeared for the first time in the Ninth International Directory ICD issued by the World Health Organization in 1978 and then appeared in the third edition of the guide the Diagnostic and Statistical DSM-(1980) 111 under the name of infantile autism, and in the third revised edition (1987) DSM-111-R, a distinction was made between autism and schizophrenia, and in the Fourth, DSM-1V (1994) and revised fourth edition (2000) DSM-1V-R reprinted The use of the term autistic disorder (APA, 2000).

2.5. Theoretical Concept

2.5.1. Autism spectrum disorder (ASD)

ASD is a classification of DSM-5 which involves disorders which are manifested by widespread and typically serious impairment of mutual social interaction abilities, deviance in communication and minimal stereotypical behavior patterns such as "autistic disorder, Asperger's disorder, pervasive developmental disorder – not otherwise specified (PDD-NOS) ,childhood disintegrative disorder, and Rett Disorder", today, they are known as ASD. (Volkmar, *et al*., 2014).

This adjustment helps alleviate issues that occurred when attempting to differentiate between these often-related disorders. Likewise, there are multiples of differences between individuals diagnosed with ASD, ranging from mild to very extreme behaviors and disabilities that are easier to conceptualize on a spectrum (Videbeck 2010).

Mary & Townsend in 2015 focusing on characteristics raised by children with ASDs marked by the child's regression into the self and into the imaginary world of their own creation. Activities and desires are minimal and could be considered a little weird. This also involves a continuum of symptoms based on severity level which occurs approximately 4.5 times more frequently in boys than in girls. Late childhood onset of the condition occurs, and in most cases, it follows a recurrent path of symptoms persisting into adulthood.

2.5.1.1 Autistic disorder

Autistic disorder has repetitive and restricted behaviors and deficits in social communication and interaction. Although autism's hallmarks are weakness in social communication, there is growing evidence that the condition is often related to motor development impairment (Choi 2019).

2.5.1.2 Asperger's disorder

Asperger's syndrome (AS) is a developmental condition marked by severe social interaction and communication problems, along with limited interests and repetitive behavioral patterns. The cause of Asperger's syndrome is not yet known, but it is suspected that an inherited (genetic) aspect is involved. In special cases it can be caused by infections during pregnancy, teratogens and toxic exposure. Some of the symptoms that may occur are: less socially active, less friends, not interested in making friends,

unable to communicate emotions, no eye contact, fewer facial expressions, inability to use gestures, poor communication, loss of relationship, sensitivity to external stimuli, reliant and repeated behavior such as arm wave. (Saraswati., *et al.,* 2018).

2.5.1.3 Pervasive developmental disorder – not otherwise specified (PDD-NOS)

Described as defects in the development of social and communication with a repetitive behavior and narrow interests (APA, 2000). Unfortunately, the diagnostic form of (PDD-NOS) has no clear criterion and is often viewed as a general diagnosis for children who do not meet the requirements for one of the other common developmental problems (Köse, *et al.,* 2017).

2.2.1.4 Rhett's disorder

A severe and progressive neurodevelopmental condition involving a wide variety of neurological and behavioral symptoms. With an occurrence of 1:10 000–15 000, Rett's syndrome is the second more common cause of serious mental disorder in women and a large proportion of those affected meet diagnostic criteria for ASD during its developmental regression time. (Borghi & Vignoli 2019).

In 1966 the German Viennese pediatrician Andreas Rett originally identified the Rett's syndrome. The central diagnostic characteristics of Rett's syndrome are four clinical manifestations: lack of expressive language; lack of fine motor (i.e., eye) skills; failure of ambulation; and presence of stereotypical hand movements. Such symptoms, and other more variable in frequency and severity, appear at various times during the complex course of Rett's syndrome (Eubanks, 2019).

2.5.1.5 Childhood disintegrative disorder (CDD)

A rare disorder manifested by delays in language production, social interaction and motor skills (> 3 years of age). In 1908, Thomas Heller, an Austrian educator, first defined disintegrative disorder in the childhood. It is a complex disorder which affects many different developmental areas of the child. It is grouped with the PDD-NOS and is linked to the more severe and better-known autism disorder (Al Mosawi, 2019).

Childhood disintegrative disorder is distinguished by an entirely normal development for at least the first (2-3) years following birth, as evidenced by the emergence of age-appropriate verbal and nonverbal communication, social interactions, play and adaptive behavior. Then patient typically displayed significant reversal in language, social interaction, motor and cognitive abilities. It is related to behavioral, affective symptoms such as anxiety, hyper activity, and occasionally hallucinations. CDD prevalence is 1 in 100,000 children and is higher in boys relative to girls, with an 8:1 ratio, respectively. CDD is often sometimes associated with seizures (Siddiqui *et al*., 2019).

Childhood disintegrative disorder is an unusual condition that resembles autism, but the pattern of onset, path, and outcome is somewhat different. CDD is characterized by a period of normal development, typically (2-4) years, followed by a substantial regression and ability loss. Usually language, interest in the social world, and sometimes toilet and self-care skills are lost, and an overall lack of interest in the world will result. The child typically looks very much like a child with 'classical autism' (Di Vara, *et al*., 2022).

2.6 Epidemiology

Autism was considered as a rare condition, and was appraised to have occurred in the 1960s in 4 to 5 children per 10,000. Current statistics are 1 in 59 children from all cultural, religious, and socioeconomic groups in the United States and 1 percent worldwide (CDC,2014). The prevalence increased worldwide but much lower in countries outside North America and Europe (Sheila & videbeck, 2017).

In 2007, in a total of 14 locations in the US, the Autism and Developmental Disabilities Monitoring Network (ADDMN) listed autism rates in children aged 8 years ranging from (1 in 303) to (1 in 94) over two times (2000 and 2002); the average rate was 1 per 150 or 6,6 in 1000 in 8 years of age. One of the little researches in Canada that investigating the prevalence of ASD which showed the average incidence was 6.5 in 1000, while 2.2 in 1000 for AD, 3.3 in 1000 for PDD-NOS, and 1 in 1000 for AS (Johnson *et al*., 2017).

As long as autism was seen as a fairly rare disorder, an epidemiological result has altered the view drastically, that the CDC reports the prevalence of ASD in boys (1 in 42) as five times as girls (1in 189), based on broad surveys in the US. The website of the CDC also provides statistics from several researches in Europe, North America and Asia displaying the prevalence of ASD in about 1 per cent. A study conducted in South Korea that surveyed children in schools recorded a prevalence of 2.6% (3.7% in boys and 1.5% in girls). Another study in England measured the prevalence of ASD in adults at nearly 1 per cent (Brugha *et al*, 2011).

However, the comparability of epidemiological studies is difficult, that they differ in demographic composition studied, recruitment methods, sample size, design, awareness, participation levels, diagnostic criteria, resources

used as well as whether the criteria for disability are used. (Nguyen, *et al*., 2015)

Field experts describe this rise in prevalence by growing awareness and enhancing disease identification and detection. Few researches investigate the prevalence of autism in children with intellectual disabilities in Northern and Sub-Saharan Africa however, no ASD research in children with no intellectual disabilities. However, a substantial increase in ASD has been recorded among children of Ugandan mothers and Somali women living in Sweden (Fuentes *et al*., 2014).

ASDs have become an emerging public health concern in Iraq and there is no local epidemiological study, as well as no official statistics on the number of people with autism in Iraq, but estimates show that at least 6,000 children across Iraq, while another study published by The University of Guilford in 2012 revealed that more than 5,000 Iraqi children are autistic because of the war (Alnuaamy 2016).

Cambridge University published a special study in 2011, which revealed that 75 out of every 10,000 Iraqi children were autistic (Alshemary 2019).

The early occurrence with developmental delay constituting as 80%, which beginning in infancy stage, whereas the remaining 20 percent of autistic children have generally normal growth and development up to the age of two or three when developmental deterioration or ability loss starts (Fitzgerald, 2016)

2.7. Causes and risk factors of ASD

Rahbar et al., 2011 stated that the causes of ASDs are unclear, evidence indicates that their origins are likely to be hereditary or the result of

interactions between gene-environment factors occurring in utero or early childhood. The following factors were taken as predisposing factors:

2.7.1. Physiological factors:

Family Studies:

Several studies have indicated that autism is spread among families with language difficulties in addition to psychological problems and learning difficulties, some studies confirmed the high level of depression and anxiety among mothers and sisters of autistic children, and the high level of depression in their fathers. -5%. Also, siblings of autistic children have a risk of developing autism 25 times more than normal children. (Oerlemans, *et al*. 2016).

2.7.2. Biological factors:

Psychological theories faced a lot of criticism, and interest in biological factors increased as a major cause of autism, and increased attention to the anatomical aspects, which showed abnormalities the interest in biological factors has led to the establishment and work of brain and tissue banks that collect newly deceased autistic persons, and make tissues available for research. (Chaste, P., & Leboyer, M. 2022).

Biological factors include:

2.7.2. A. Genetic

ASD has a genetic link, researches have shown that family with autistic child have an increased chance of having other children with the same condition. Other studies on twins who are monozygotic and dizygotic which also shown a genetic presence. Many studies have confirmed the role of genes in contributing to autism. Some argued that the main autism-causing gene was

OXTR, while some went to the CNTNAP3 gene, although some emphasized the role of the ASTN2-gene in autism. (Liu, *et al*., 2016)

It is clear from the above: that autism has a strong genetic basis, although the basis the genetics of autism are complex and unclear, and this may be due to the explanation that autism is affected and changed by different effects or by the interaction of a number of genes. (Liu, *et al*., 2016)

2.7.2.B. Twin studies:

Studies of twins have confirmed that the basis of autism is hereditary, so the prevalence of autistic twins is between 90-80%, and if one of the twins has autism, the other rarely develops it, and some of the twins are gone. Studies indicate that identical twins are more common than non-identical twins. (Chaste, P., & Leboyer, M. 2022).

2.7.3. Neuroanatomical Factors (Neurological)

A study shows that many anomalies in brain anatomy and/or physiology are associated with ASD such as an increase in surface area in temporal, frontal, and parieto-occipital lobes and a significant enlargement of temporal lobe white matter. Some developmental disorders have also been identified, such as fragile X syndrome, postnatal neurological diseases, congenital rubella, and phenylketonuria. (Maynard & Turowetz 2017).

Numerous studies have confirmed that many major brain regions are closely related with autism, namely Cerebellum, Cerebral cortex, Corpus Callosum, Basal Ganglia, some studies have indicated to the brain the increase in the growth of hormones and to the excessive activity of neurons in the brain, and the imbalance of brain systems, as confirmed by some studies on the difference between the brain of an autistic child and the brain of a normal child. (Mary & Townsend 2015)

A recent study that scanned the brain showed that there are patterns of Cingulate Cortex signals that are different in autistic people than in normal ones, and some studies have confirmed abnormalities in the activities of the immune system during neurodevelopmental formation responsible for autism the results of the studies also showed a deficiency in the secretion of metabolism results for the region cortex in 5% of autistic. (Lord, *et al*., 2000)

2.7.4. Biochemical Factors

The organic factors emphasized by the biological school were not limited to the factors genetics only or neural factors only), but indicated a role Biochemical factors and biochemical imbalances autistic children and attention has focused on the role of neurotransmitters, dopamine, and serotonin in the occurrence of autism. Despite the influence of biochemical factors, there is not enough evidence to confirm from the presence of these factors for all autistic people and the extent of their impact on them (Barkley, 2013).

2.7.5. Obstetric and prenatal complications environmental factors

Several studies have pointed to obstetric and prenatal complications during pregnancy. For children with autism. It includes pre-factors Birth:

Maternal diabetes during pregnancy or German measles, maternal bleeding, psychological state and maternal depression, mother's risky age and risky pregnancy. Some also went to the fact that late marriage, and delayed pregnancy with carrying the responsible genes about autism leads to autism. and eat the mother antibiotics, alcohol, drugs, and heavy smoking lead to autism. Some studies have also shown that the MMR serum is responsible for autism, and this link is confirmed by the appearance of autism symptoms in the period of time (Mary & Townsend 2015).

Childhood vaccinations is still questionable since given for children, it has doubled over the past two decades, and these vaccinations often contain thimerosal, which contains 50% mercury and despite this, there is no conclusive evidence of a relationship between the MMR serum and autism. The DSM-5 specified some environmental risk factors that contribute to ASD such as low birth weight, fetal exposure to valproate, or advanced parental age (Mary & Townsend 2015).

There is continuing debate on the mechanisms by which vaccines containing measles, mumps, and rubella (MMR) cause late-onset autism spectrum disorder (ASD). Observational studies that were carried out over a period of many years and were carried out by the National Institute of Child Health and Human Development, the Centers for Disease Control and Prevention, and the Academy of Pediatrics all came to the same conclusion: that there is no correlation between vaccinations and autism, and that the MMR vaccine is effective. Meta-analysis of research of over one million participants based on data found nothing to indicate any association between vaccination and autism. Litigation and class action suits are still under way, however, as some parents and public figures refuse to recognize such findings (Sheila & videbeck, 2017).

2.7.6. Environmental pollution:

One of the factors that may lead to autism is toxin poisoning, which it leads to brain damage, and evidence of the seriousness of environmental pollution is what happened in the village of Leo Mister in Massachusetts, America, with a population of 36,000. An abnormal rise in the prevalence of autism cases, affecting one out of every hundred children, which raised the interest of officials in the relevant agencies, and at their request, Stanford University came forward in America, allocating $25 million to conduct a

comprehensive survey of the environment in that region. (Center for Disease Control and Prevention 2012)

Preliminary results showed that the liquid and gaseous waste that pours about five tons including in the river running in the village that emits from a factory for sunglasses from the sun's ray's liquid and gaseous wastes contain chemicals, the most important of which are led and mercury relationship to intellectual disability. (Koegel, *et al*., 2014)

2.8. Theories explaining autism:

Autism is one of the disorders that has confused scientists and researchers there is no specific cause for autism and this may be due to the unfamiliar nature of the behaviors of people with autism, and given that each case has its own individual characteristics and therefore many theories have emerged and the explanatory causes of autism, the initial explanations of autism focused on the causes Psychodynamic, and in the 1970s, psychologists moved to cognitive explanations, in while most of the current research and studies assume that it is due to biological reasons. Although from these efforts, no direct and specific factors were found for autism. Can classify these causes and theories as follows: (Levy, F. 2007).

2.8. Psychological theories

The mother of the autistic child was termed The Fridge Mother, because of her coldness and indifference, so that some of them were transferring autistic children to other families as a way to treat autism. these mothers have with a high economic and social level, and a high professional and educational level, with high intelligence. Despite this, this theory did not receive attention, as most researchers rejected these theories for many reasons, including: Studies and research have not confirmed the validity of

the hypothesis that autism is greater in families with a high intellectual and economic level studies show that mothers of autistic children do not differ in intelligence and class character about mothers of ordinary children, and these mothers have children ordinary, treatment tainted by warmth and love did not lead to the disappearance of the symptoms of autism, and also there is great pressure on mothers as a result of their child being diagnosed with autism which leads to the occurrence of emotional problems later and not prior to the occurrence of autism (Tager-Flusberg, H. 2005).

There are many theories that have provided explanations for autism, including:

2.8.A. Theory of Mind:

It is one of the theories that has gained wide spread recently due to its role in explaining the lack of social interaction in children with autism. Autistic children can understand what is going on in the minds of others, and realize their point of view. Autistic children suffer from deficiencies in social skills, and a lack of understanding of complex social emotions (Baron-Cohen, S.2009).

2.8.B. Cognitive Theory

researchers have emphasized that the main reason of autism is due to cognitive deficiencies and lack of mental perception is due to the difference in the child's ability to perceive the world, which is called the initial mental perception. The central association theory explains why autistic children suffer from poor attention for their permanent tendency to focus on the partial details of the subject rather than the general view. Some have argued that autistic children have limited ability to see the big picture, as they tend to focus on small details, and this weakness is the main reason resistance to

change, and their commitment to a strict and specific routine (Tager-Flusberg, H. 2005).

2.8.C. Executive Function Theory

Many studies have confirmed executive dysfunction in autistic people, which leads to deficiencies in the planning process, behavioral inhibition, general memory, error detection, and executive function disorder in autistic people that leads to stereotyped, repetitive behaviors and interests. However, one of the weaknesses of the executive function theory the inability to measure it, and executive function disorder is not only linked to autism (Levy, F. 2007).

2.9. Sign and symptoms of ASD

Mary & Townsend (2015) specified that the person with ASD could convey a particular later signs and symptoms as failure to shape interpersonal relationships, language can be entirely absent or marked by immature grammatical form, strong obsession with movable objects, strong discomfort at shifts in trivial environmental aspects, behaviors which are self-injurious, such as hitting the head or biting the hands or body. While the early signs and symptoms of ASD as adopted from (Autism and Developmental Disabilities Monitoring Network, 2007) that the child starts not to respond to his or her own name by 1 year, shows little interest in pointing to things, does not play pretend games, avoids eye contact and tends to be alone, delays speech and language skills with repetitive words or phrases over and over, disturbed by small routine changes with odd responses to sounds, smells or other sensory experiences.

2.10. Clinical picture of Autism

The clinical picture will be dealt with in light of:

2.10.1. The clinical picture of autism in light of the age stage:

A- Clinical picture of autism during infancy: Many parents of autistic children confirmed that their children are in the stage of infancy, their demands were few, and their social appearance was normal, although some were they refuse to breastfeed, rarely make eye contact with their parents, and do not react appropriate for verbal and nonverbal cues, do not show appropriate emotional responses, and cry incessantly (Ribeiro, *et al*., 2017).

The autistic child shows inappropriate responses when dealing with others refuses to be hugged and appears either stiff or flabby when held or cuddled, and may starts crying if someone touches him, and also avoids eye contact. The infant is difficult to accept whether natural or artificial feeding, and nearly half of the parents of autistic children notice abnormal behaviors of their children at the age of 18 months. Parents notice them at 24 months (Eltyeb, 2017).

B - Children with autism appear to be in good physical health, and they are often very attractive their behavior seems distant or unaffected by the world around them, as their attention is focused on special things such as a smooth pebble or an empty box. Anger in the pre-school stage, the autistic child shows difficulty communicating and playing with others, as he does not have the ability to play imaginatively with other children, and finds it difficult to establish or maintain relationships with others, which makes him feel lonely and the severity of symptoms gradually decreases , especially if he finds special care from those around him, as his staring behavior decreases,

and a small percentage of autistic children do not improve their social behaviors, but become more negative (Mary & Townsend 2015).

C- The clinical picture in adolescence and adulthood: more than 70% of People with autism reach the stages of adulthood and old age, and they still suffer from the severity of the disability, and although the underlying problems remain, the symptoms become less severe than in childhood, and symptoms of autism vary over time. Most autistic people show a gradual improvement in symptoms, even if they continue to show many problems in their experience. In adolescence some symptoms of hyperactivity - self-harm become worse in nearly 35% of autistic people, and in adulthood abnormalities persist in stereotyped movements, anxiety and inappropriate behaviors and some studies have shown that 70% of them continue to have disability, 50% they develop useful speech, 20% develop seizures, 15% work independently, and the adolescence stage is a difficult stage for some autistic people due to the increase in sexual behavior in addition to the rarity of autistic marriage (Thabtah & Peebles, 2019).

2.10.2. The clinical picture in light of the symptoms:

Symptoms of autism in children with autism vary in severity or Continuity or age and from one individual to another. I always have a set of symptoms all autistics have basic symptoms, and another group often shows up in everyone autism is a secondary symptom (Matson, 2016).

The main symptoms are:

Shortcomings of social interaction, poor verbal and nonverbal communication, and stereotyped repetitive behaviors (Eltyeb, 2017).

Secondary symptoms include:

There are some symptoms that not all children with autism have, so no it is included in the diagnostic criteria, but it affects the autistic child and all family members such as: physical and kinetic characteristics, abnormal responses to sensory stimuli, cognitive deficiency, weak self-care skills, exceptional skills, disorder of the emotional state, sleep and eating disorders, and severe behavioral problems (Autism and Developmental Disabilities Monitoring Network, 2007).

2.11. Diagnosis of ASD

ASD diagnosis can be complicated, since there is no medical test, like a blood test, to diagnose the disorders. Diagnosis depends on the child's behavior and development. ASD can sometimes be detected at 18 months or younger. By age 2, a diagnosis by an experienced professional can be considered very reliable. However, many children do not receive a final diagnosis until much older. This delay means that children with an ASD might not get the help they need. Diagnosing an ASD takes two steps, developmental screening and comprehensive diagnostic evaluation (center for disease control and prevention 2014).

2.11.1 Developmental screening

A simple test to express whether children are learning basic skills as they should, or whether they may be lagging behind. The pediatrician can ask the parent some questions during the developmental screening or play and speak with the child through the assessment to see how he or she reads, talks, moves and acts. A delay may be a mark of a problem in any of those fields. All children will be assessed at 9, 18, 24 and 30 months for developmental disorders and disabilities during routine doctor visits (Ribeiro, *et al*., 2017).

If a child is at high risk of autism or other developmental disorder, further screening may be required (e.g. having a family member with autism or if there are a behavior often related to ASD, low birth weight, preterm birth or other causes). It is important for pediatricians to evaluate all children for developmental disorders, especially those at higher risk for developmental problems. If there are any marks of a problem, a detailed diagnostic assessment is required (Matson, 2016).

2.11.2 Comprehensive diagnostic evaluation

A comprehensive and systematic assessment consist of looking at the development and behavior of the child, and make interview with the parents. Likewise, it may include tests for hearing and vision, neurologic test, genetic test, and other medical investigation. Developmental pediatricians, child psychologists or therapists and child neurologists are experts who can perform this form of evaluation (Maynard & Turowetz, 2017).

2.12. Early screening tools to ADS in toddlers and children

However, several screening tools have been developed over the last decade to identify children with an ASD. This tools aid for early detection of ASD, but not diagnostic confirmation, is primarily based on clinical assessment. There are currently a number of internationally validated ASD tools in place (Eltyeb, 2017). This tool includes:

2.12.1. The Checklist for Autism in Toddlers (CHAT).

The CHAT is not a diagnostic instrument; it is just a screening tool that can identify autism-risk children who are aged 18 months and who need additional comprehensive evaluation. Early detection of autism is important, but this in itself is not an end. How service providers deal with very young autistic child and his or her families is most important (Gook *et al*., 2013).

Early detection should be accompanied by access to early intervention programs, parent education and support and a variety services such as health, education and welfare for each child and family relating to children's difficulties with shared care and pretend to play at 18 months (Brereton, 2011).

2.12.2. Pervasive Developmental Disorders Screening Test (PDDST).

The PDDST is a parent-completed questionnaire screening test which consists of three screening stages developed based on different settings. Step one is called primary care screener, while step two, developmental clinic screener, is planned primarily for children who are already accessing supportive services. Third step is the crucial step in which children who are (18 – 48) months of age are classified as autistic and overlooked for other common developmental problems (Johnson *et al*., 2017).

All items of this tool are introduced for parents through an interview or questionnaire which takes about 15 minutes to complete and 5 minutes to measure the score (Rellini, *et al*., 2014).

2.12.3. Childhood Autism Rating Scale (CARS).

The CARS was designed to identify children with ASD by studying specifically the activity of the child in responses that include touch, light, smell, sound, intellectual response consistency, body usage, communication, and social interaction. The initial form of CARS dealt with children only under the age of 6, and was later updated to children between 6 and 13 years old in the CARS- 2nd version. The CARS-2 contains 3 main sections. Parents, caregivers and teachers, are only given access to first part of tool. Information taken in first part used as a basis for gathering the information needed for second and third part. The other two sections performed by specifically

qualified practitioners that includes evaluators, educational practitioners, language therapists, physicians and other specialists who are familiar with autism screening and assessment (Thabtah & Peebles, 2019).

2.12.4. Screening Tool for Autism in Two-Year-Old's (STAT).

This form is used to identify autism in children < 24 months of age. The STAT has excellent sensitivity and specificity in children with autism or non-autistic spectrum disorders, but it is lower successful in differentiating autism from pervasive developmental disorder otherwise not specified (Rellini, *et al*., 2014).

Twelve interactive elements make up the STAT, which evaluates many behavioral areas including motor imitation, directing attention, asking, and play. Examiners with training who were unaware of the children's conditions conducted the test. Lower scores imply less impairment, with the overall score ranging from zero to four (Eltyeb, 2017).

2.12.5. Quantitative Checklist for Autism in Toddlers (Q-CHAT) Based on Questionnaires.

The Q-CHAT was created as an antiquated quantitative checklist to be used by medical experts in conjunction with a description provided by the child's parents based on their observations of the child's behavior. It is one of the first techniques of screening for autism. The initial version of Q-CHAT was intended to identify ASD in infants between the ages of 18 and 24 months (Thabtah & Peebles, 2019).

2.12.6. Autism Screening Instrument for Educational Planning—3rd Version (ASIEP-3)

The ASIEP-3 is a unique toolkit that includes the Autism Behavior Checklist (ABC), a prognosis learning rate, an assessment of education, an

assessment of interactions, and a sample evaluation of verbal behavior. It was created using normed data taken from a sample population in the United States. It's made to spot children between the ages of zero and two years and eleven months and Thirteen years old who exhibit highly autistic behavior. It also creates educational programs for these children and tracks their development through time (Pijl, *et al.,* 2018).

ASIEP-3 gathers standard data by questionnaires of ABC that completed by teachers, school psychologists, parents, caregivers and other health professionals, as well as providing children with activities that recognize their individual needs (Sun *et al*., 2013).

2.12.7. Screening Tool for Autism in Toddlers and Young Children

A tool of screening, which distinguishes autism children from those with other developmental disorders. This device has been used to test children aged 24 to 36 months who are supposed to have ASD. This screening tool is prepared to be used by a providers of community services include speech-pathologists, psychologists, healthcare professionals, pediatricians, preschool teacher and social workers who are best able to evaluate their behavioral and communication disabilities by working closely with children (Towle & Patrick, 2016).

Using the STAT tool kit, expressive social activities such as play, imitation, interaction, and request are explored explicitly. Upon completion of all the items, the supervisor calculates the item scores according to the behavior and activities of the child. The score can be passed, skipped, or declined. This identifies children who are risky for autism, and those reported as causes of autism are guided to the appropriate healthcare professionals for additional assessment and if essential, medication (Charman, 2014).

2.12.8. Early Screening for Autistic Traits (ESAT)

This tool was designed to distinguish children aged 0–36 months with symptoms of autism from those with other forms of developmental problems. Although it is used to screen children's behavior, it focuses more on detecting neurodevelopmental problems in child aged 14–15 months. In 2006 ESAT emerged as a key checklist for ASD screening based on the behavior of a child during play, eye contact, mutual attention, emotions, communication and interaction with others (Oosterling *et al.*, 2010).

A skilled professional health expert provides the checklist for completion by the child's parents or other carers. Even though children with increased ESAT scores are recognized as being more susceptible to autism and other associated developmental abnormalities, the test does not distinguish effectively between cases and controls for infants younger than 25 months. Some babies with lower ESAT scores, identified as controls, were eventually diagnosed with ASD (Johnson *et al*., 2017).

2.12.9. Infant Toddler Check List (ICT)

It was developed to understand language and communication impairment in children between 6 and 24 months old. While ICT is often widely used as an autism screening instrument, ICT's emphasis is on detecting speech delays before the child even starts talking. This approach is primarily can be accomplished by parents or other careers who are regular acquainted with the actions of the child. (Towle & Patrick, 2016).

2.12.10. The Modified Checklist for Autism in Toddlers (M-CHAT).

Is an extended US edition of the UK original CHAT. This test consists of 23 yes/no items designed for screening children between 16 and 30 months old to determine ASD risk. It can be assessed and graded as part of a children's

check-up, and can also be used by psychologists or other clinicians to determine ASD risk. The M-CHAT's primary objective was to improve sensitivity, which meant to detect as many ASD cases as possible. Consequently, there's a high rate of false positive, which means that ASD will not be diagnosed among all children at risk for ASD (Randall M, 2018).

2.12.11. Autism Screening Questionnaire (ASQ).

Autism Screening Questionnaire is a questionnaire administered by parents and other caregivers, designed especially for children between 4 and 11year old. ASQ contains 50 items, time needed to complete is about 20 to 30 min (McPheeters *et al*., 2016).

In order to standardize direct observations of social interaction, communication, and playing in children suspected of having autism, ADOS were initially developed in the 1980s. It employed instantaneous coding; subsequently, more in-depth studies could be performed using videotapes of the schedule. Adapted on empirical studies in child development and autism, the activities and behaviors to be categorized throughout the program were developed. The ADOS was designed to be given to kids between the ages of 5 and 12 who have expressive language abilities at least on par with those of a 3-year-old. It was suggested as an additional tool for the Autism Diagnostic Interview (Lord *et al*., 2000).

2.13. Diagnostic test and evaluations of ASD

As stated by Randall M, (2018), for accurate diagnosis of ASD, we need to gather the following data: specific case history containing reports of child health, developmental and behavioral background, and current medical condition, medical assessment involving general physical and neurodevelopmental evaluation, including testing of hearing and vision,

family history of physical and mental health, and comprehensive speech and language assessment.

In addition, (Lonnie Zwaigenbaum, *et al*.,2019) mentioned that diagnostic evaluation includes: Genetic testing, particularly if there is a family history of intellectual disability or genetic conditions associated with ASD, metabolic testing, if the child exhibits symptoms such as lethargy, cyclic vomiting, pica, or seizures, hearing and vision screening to see whether the child has a problem that might be contributing to his symptoms, blood lead testing, wood's lamp exam, a special skin tests to screen for tuberous sclerosis, neuroimaging such as (MRI), Electroencephalography (EEG) and, Nutritional evaluation for children who eat very limited foods.

2.14. Autism treatment:

The methods of treating autism varied, as they differed from one period of time to another, so the methods of treating autism disappeared as old as psychodynamic therapy, new and more effective methods such as those based on me have appeared behavior modification, in addition to medical treatment such as drug and vitamin therapy. Although autism is generally considered a chronic disability, there is no single cure for autism, but effective therapeutic interventions provide or stimulate different aspects of development and provide autism with appropriate harmonic behaviors and stress relief Parents, reduce symptoms of autism, while developing basic life skills, which makes him practice his life and activities independently (Minjarez, *et al*., 2011). Among these treatment methods:

2.14.1. Psychodynamic therapy:

Until the mid-20th century, most parents of autistic children blamed themselves for the condition that their children have suffered from since birth or early childhood, which affected the treatment the Bettelheim program that

he implemented in a school based on the special education as a model for psychoanalytic therapy, which focuses on creating an environment away from Parents so that the autistic child can grow as an independent personality. (LeClerc & Easley 2015).

2.14.2. Behavioral treatment

The aims of behavioral therapy are to minimize behavioral symptoms such as stereotypic behavior and encourage education and development, particularly language skills acquisition. Comprehensive treatment, comprising special learning and language therapy, and anxiety and agitation cognitive behavioral therapy, is related to more favorable results (Sheila & Videbeck, 2017).

Although some confirm the effectiveness of previous treatment methods, the treatment remain behavioral is the cornerstone for developing the skills of the autistic child, and for reducing the symptoms of autism behavioral intervention depends on many strategies and techniques that help autistic people have to learn desirable behaviors and get rid of the behaviors unwanted things, such as reinforcement, shaping, modeling, extinguishing and other. As adapted from (Bijou, & Redd, (2015) and Applied Behavior Analysis Online Programs Staff, there are a five types of behavior therapy for child with ASD:

2.14.2.A. Applied Behavior Analysis (ABA)

Children may benefit from using Applied Behavior Analysis to discern between undesirable behaviors and succeed at achieving positive objectives. When practicing ABA, a certified therapist should work with a child one-on-one for at least forty hours each week. Goals would be set once the child had been watched (Love *et al*., 2009).

In order to implement the program, the therapist would praise the desired behaviors while dismissing undesired ones. It is advantageous for a parent or caregiver to study ABA so that a therapist may spend less time with the children and the youngster can engage in genuine social settings (Choi, 2019).

2.14.2.B. Relationship Development Intervention (RDI)

A novel behavioral treatment that RDI explored focusing on is the ASD child's social behaviors. When employing RDI, parents take a more active role than a therapist. Goals are established for the kid after initial evaluations are completed by a professional. To understand how to implement the treatment, the parents can participate in a lengthy workshop or view a five-hour DVD. Additionally, parents upload videos of themselves with their children so that specialists may comment and provide suggestions for additional therapies. When a child is young, RDI tends to function best, but there is promise for older children as well (Lang 2009).

2.14.2.C. Sensory integration therapy

This kind of treatment aims to increase a children's sensitivity to sensory stimulation that the children may find overwhelming. It is possible to handle loud sounds, bright lights, and touching. The child will be exposed to progressively stronger doses of the stimuli being worked on by the therapist utilizing this sort of treatment. There is no use of force, even yet the therapist must push the child beyond his or her comfort zone. If sensory integration treatment is going to work, it doesn't take a lot of time every session, and effects generally show up rather fast (Choi, 2019).

2.14.2.D. Communication interventions

It's crucial for kids with ASD. Different theories are used, but they all center on the fundamental communication deficiency that many people with autism share. Without efficient communication, you will often see undesirable actions brought on by annoyance and misperceptions of the circumstances. An person may convey his wants and desires more effectively by learning communication skills, whether they are verbal or include the use of aids like iPads. A child will find this to have more significance if you allow it to occur in public settings. Modeling, peer tutoring, playing games, and other methods of social learning are all examples (Brereton 2011).

2.14.2.E. Treatment and Education of Autistic and Related Communication handicapped children (TEACCH).

used to support ASD children in achieving success with their dysfunctional social habits. It operates in a continuously ordered and structured environment. In order to improve the child's surroundings, activities are also reliably ordered and graphically structured. In a certain order, child move on to practical skills and activities. When parents are instructed to use a comparable strategy at home, the results are more favorable (Fuentes, 2014).

2.14.3. Pharmacological

Drug therapy: Drug therapy is used to treat some of the symptoms of autism such as hyperactivity, depression, aggression, self-arousal behaviors, and if research and studies do not prove the confirmed efficacy of a drug with all children with autism, there is no specific drug that can treat or modify the basic problems of autism itself, and therefore drugs are used in a supportive way alongside behavior modification programs, and more (Kazmerski, 2019).

Of the half of children with autism prescribed drugs to relieve the symptoms of autism. Among these drugs: fenfluramine haloperidol - primidol -Naltrexone - Secretin - Antidepressants - Ritalin - Adderall - Dexedrine - Fenflurine - amphetamine - phothiocine and others, and all these drugs and others have their positive and negative effects, and therefore these drugs need special follow-up in terms of knowing the level of the drug in the blood, the extent of its effectiveness on the child himself, the amount of the appropriate dose, and follow-up to the results of treatment by recalling what happened to the child and notes Parents and teachers, and it all varies from child to child, which makes medication use is an individual decision (Trudeau, *et al.*,2019).

For specific target symptoms like temper tantrums, aggression, self-injury, hyperactivity, and stereotyped behaviors, pharmacological treatment with antipsychotics such as haloperidol (Haldol), risperidone (Risperdal), aripiprazole (Abilify), or combinations of antipsychotic medications, may be effective. Other medications, such as naltrexone (ReVia), clomipramine (Anafranil), clonidine (Catapres), and stimulants to diminish self-injury and hyperactive and obsessive behaviors, have had varied but unremarkable results (LeClerc & Easley, 2015) (Sheila & videbeck 2017).

Risperidone (brand name Risperdal; for use in children and adolescents aged five to sixteen years) and aripiprazole (Abilify; in children and adolescents six to seventeen years) are the two medications that have been given the green light by the Food and Drug Administration (FDA) in the United States to treat the irritability that is associated with autism spectrum disorder (ASD). Temper tantrums, rapidly shifting moods, aggression, and willful self-injury are some of the behavioral symptoms that these drugs are designed to treat (LeClerc & Easley, 2015).

The dosage of risperidone for ASD depends on the child's weight and clinical outcome. A mild to moderate increase in appetite, Drowsiness, weariness, nasal congestion, drooling, constipation, weight gain and dizziness were the most frequent adverse effects. No instances of tardive dyskinesia were found in clinical research, despite occasional claims of strange movements being made (Kazmerski, 2019).

Caution about potential side effects, such as diabetes, hyperglycemia, neuroleptic malignant syndrome, and tardive dyskinesia should be maintained while administering risperidone. Sedation, exhaustion, weight gain, vomiting, and tremor were the most commonly reported negative effects in clinical investigations using aripiprazole. Sedation, drooling, tremor, vomiting, and extrapyramidal disorder were the most typical side effects for which aripiprazole was stopped. Aripiprazole maintenance therapy's effectiveness hasn't been studied; therefore, patients should have monthly examinations to see whether they still need treatment (Mary & Townsend, 2015).

2.14.4. Vitamin therapies and dietary supplements

Many ASD treatments are focused on food therapies that families believe may lead to increased behavioral outcomes, such as vitamins, minerals, essential fatty acids and other nutrients or supplements, as shown in table 2.2 Recent studies have indicated nutritional and dietary supplements may play an important role in improving ASD symptoms (Hamadneh, *et al*., 2019) (Li, *et al*., 2017).

2.14.4.A. Vitamin B6 and Magnesium: Xia (Xia, R. R. 2011).indicated that autistic children need doses that are not available in normal foods some people even use vitamin B6 with magnesium with autistic children that (50% of the autistic people improved their behaviors and social skills, and their desire to

learning Some studies have also found that the use of vitamin B6 with magnesium leads to a better improvement than the use of vitamin B6 only.

2.14.4.B. Vitamin C: The use of Vitamin C improves the condition of children autism, which led to an improvement in cognitive performance, an increase in the ability to focus, it is often used with vitamin B to reach better results, in addition to using it with vitamin B1, B12 with magnesium, calcium and zinc (Trudeau, *et al.*, 2019).

2.14.4.C. Treatment of mercury poisoning: It is considered the latest type of treatment, and it is based on giving the child a specific solution that helps to collect mercury from the body, which collects inside it as a toxic substance and turns it into urine, as all vaccinations taken by children must be ensured that they are free from Tyrosyl, while avoiding combined vaccinations (Xia, R. R. 2011).

Diet therapy: Some studies have found an increase of 85-90%. Peptides of autistic people, which affects cognition, learning, comprehension, and motivation, in addition to weak immunity, and problems with the intestines, which is why some suggest the need to follow a specific diet free of gluten / casein some have emphasized that the autistic child improves his behavior after removing types of food, including gluten, casein, citrus fruits, chocolate, and foods that contain contains dyes, substances containing salicylic acid, tomatoes, and eggplant, but not all children with autism are affected by these foods or their behaviors are affected in a negative way there is no fixed or single diet that helps all children with autism, and the effectiveness of the diet in reducing autistic symptoms has not been proven in all autistic children. (Farrell, *et al*., 2011).

2.14.5. Exercise-based therapies

There is also various exercise that are thought to help in management of symptoms of ASD. These activities are common, healthy, but often costly, such as yoga, aromatherapy, water therapy (swimming), massage, craniosacral massage, hippotherapy (horseback riding), and music therapy (Farrell, *et al.*, 2011).

2.15. Role of mothers in treatment of children with ASD

The health and well-being of children is greatly affected by the people who deal with them, especially the pre-school age group, whose mothers are the role models for them, therefore this characteristic can be used by achieving cooperation between mothers and provider of health care to treat a child with an autism spectrum, after build-up the mothers with knowledge and recent information in advancement concerning the autism spectrum particularly to cope with children in difficult situations, as early detected, deal with the child intending to reduce the burden on the family and society (Chandran *et al*., 2019).

In the lives of their autistic young children, mothers perform a variety of roles. They are often the first to notice a developmental issue, and they must follow their concern until they obtain an acceptable diagnosis and discover or create the best solutions for their child. Mothers are frequently active participants in their children's education once they have located a treatment program that suits them. This helps to ensure that the skills acquired in the educational program are transferred to the home environment and teaches the child the variety of behaviors that are best mastered at home and in the community (Skoufou, 2019).

The child benefits greatly from mothers being recognized as playing a crucial part in the successful care of their child. The ramifications for family life are significant, and the job is not without expenses. Mothers of autistic children sometimes do several, difficult responsibilities. These include being an advocate, a teacher, and a caring family member (Gordillo, *et al.,* 2020)

2.16. Nursing diagnoses and interventions for the child with ASD

2.16.1. Impaired social interaction.

Insufficient or excessive quantity or ineffective quality of social exchange related to self-concept disturbance**,** absence of [available] significant others**,** unfulfilled tasks of trust versus mistrust or neurological alterations (the North American Nursing Diagnosis Association -I, 2012).

Interventions

Provide the child with familiar objects (a blanket, favorite toys), as these items will offer security during times when the child feels distressed. Gradually introduce hugs, touch, and smiling because the child with ASD may feel threatened by an onslaught of stimuli to which he or she is unaccustomed. Finally, support the child with your presence as he or she develops trust with the caregivers (Sheila & Videbeck 2017).

2.16.2. Impaired verbal communication.

Decreased, delayed, or absent ability to receive, process, transmit, and/or use a system of symbols to communicate related to inability to trust, withdrawal into the self, or neurological alterations (the North American Nursing Diagnosis Association -I, 2012).

Interventions

Consistent in how you allocate caregivers. This will promote trust and improve the caregiver's capacity to comprehend the child's communication attempts, expect and meet child requires up until acceptable communication patterns are established, use the strategies of consensual validation and seeking clarification to unravel communication patterns, and provide encouraging feedback when nonverbal cues like eye contact are used (Mary & Townsend,2015).

2.16.3. Disturbed personal identity.

Inability to maintain an integrated and complete perception of self-related to unfulfilled tasks of trust versus mistrust, neurological alterations or inadequate sensory stimulation (the North American Nursing Diagnosis Association -I, 2012).

Interventions

When engaging in self-care tasks like dressing and feeding, work one-on-one with the child to help him recognize his separateness from others. You can also point out bodily parts and help the child name them to help the child become more conscious of this. Increase physical contact gradually and use touch to highlight the distinctions between the child and the nurse. Be careful when touching before confidence has been built since the child can see this as threatening (Koegel, *et al*., 2014).

2.17. Complications of ASD

As listed by (CDC ,2014 and Sala, *et al.*, 2020), concerning the complications that may accrue for persons with ASD; include the following issues:

2.17.1. Mental health issues

Such as anxiety, depression, low Self-esteem and obsessive-compulsive disorder. Self-harm, eating disorders, and other psychiatric issues may be prevalent in child with ASD who are frequently misdiagnosed.

2.17.2. Physical Health Issues

Musculoskeletal issues as a result of difficulties with gait and posture, issues with hypermobile joints such as strains, stiffness, and sprains, an increased risk of gut, bowel, and stomach problems such as diarrhea, cyclic vomiting or constipation, an increased risk of intolerances and allergies to specific additives or foods, issues with weight control as a result of a poor diet or medication resulting in either being overweight or underweight, an increased risk of ear, nose. Migraines, Hearing loss or frequent headaches an increased risk of developing epilepsy, and an increased risk of developing tics or Tourette syndrome are all potential side effects (Sala, *et al.*, 2020).

2.17.3. Oral and Dental Issues

Refuses to wash teeth, teeth grinding, overactive gag reflex, medication causing cavities, cavities from sweet or sticky foods and drinks and dental injuries from self-injurious behavior or eating nonfood items (CDC ,2014).

2.17.4. Various complications

Injuries from lack of danger awareness- i.e. ingesting items, running in front of cars, sleep disturbances, falling and problems with skin irritation and allergies.

2.18. Hierarchy of Needs Theory:

Social relationships and support are essential for children in ensuring a sense of physical protection, assistance and care. Research confirms that support is important in providing protection to prevent mental health disorders and enhance psychological well-being for children in difficult circumstances (Betancourt. *et al.,* 2012).

In such circumstances, children seek social support from parents, siblings, and peers. to provide them with a safety guarantee. For example, studies have found that the impacts of ASD largely depend on whether these children can receive comfort, safety and reassurance with others. (Betancourt. *et al*., 2012).

Likewise, the strong social resources balance feelings of insecurity, worthlessness, and impotence. In the poverty conditions, individuals gather to survive, which helps as a social support and security against the traumatic events. (Acevedo, A. (2018).).

Abraham Maslow (Trivedi, A. J., & Mehta, A. 2019) stated that people have specific wants that they must try to satiate from the moment they are born. Maslow's hierarchy of needs is shown as a pyramid, with the desire for self-actualization at the top and the greatest and most basic needs at the bottom. The physical, positional security, cordial relationships and love, and esteem requirements that Maslow referred to as deficiency needs are found in the four bottom levels of the pyramid. With the exception of the most basic (physiological) requirements, if these deficiency needs aren't addressed, the person feels tense and nervous instead of experiencing any physical symptoms.

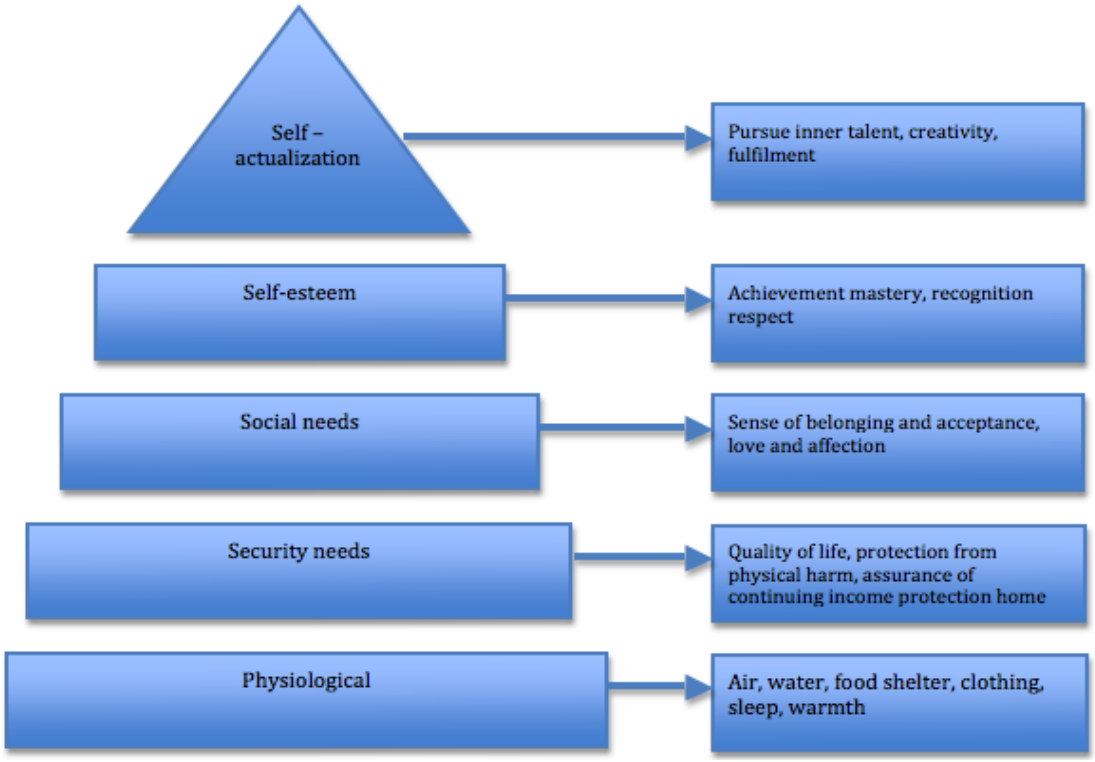


Figure 1: Maslow's hierarchy of needs theory (Source: Maslow, A motivation and personality (3nd ed.) (Trivedi, A. J., & Mehta, A. 2019)

When an individual's physiological demands are mostly met, their safety needs take priority and control their conduct. These demands are related to people's desire for a predictable, ordered environment that is free from unfairness and inconsistent behavior. Personal security, financial security, health and well-being, and a safety net against accidents and illnesses and their negative effects are among the necessities for safety and security. For instance, those who live in disadvantaged areas worry about getting the bare minimum of food required for existence. The youngsters who were interviewed and employed as informants in this case experience everyday starvation. The hierarchy of needs hypothesis states that since individuals lack food and experience bodily suffering, their needs cease at level one (Acevedo, A. 2018).

The third layer of human wants is social, which comes after physiological and safety requirements are satisfied. This psychological aspect of Maslow's hierarchy focuses on connections that are primarily based on emotions, such as those in families and social situations. In turn, the fulfillment of social and emotional needs will provide the circumstances necessary for self-esteem and have the power to regulate personal drive. The demand for self-esteem may be connected to gaining attention, reputation, and competence. It takes time and effort to develop good self-esteem and self-actualization, which cannot be immediately attained (John Burton, 1990).

As it Specified by Acevedo, A. (2018) that Maslow stresses the risks related to self-esteem based on fame and outer recognition rather than inner competency, and he sees healthy self-respect as based on earned respect. He also explains that internal motivation is important to achieve individual goals.

Mawere, *et al.,* (2016) explained the assumptions on which Maslow bases his theory of human motivation on the following:

1-"Individuals have certain needs that effect their behavior, only not satisfied needs can effect behavior, satisfied needs don't act as motivators".

2- The certain needs are organized according to the importance or hierarchy from simple physiological needs to complicated “self-actualization needs".

3- "An individual's need at any level on the hierarchy emerges only when the lower needs are reasonably satisfied".

Cianci *et al,* 2003, conclude that the most famous motivation theory is "Abraham's Theory of Needs". Who assumed his theory that within each individual there was a hierarchy of five needs which included:

A- "Physiological needs: like hunger, thirst, shelter, sex and other bodily needs. Physiological needs are the physical needs for human survival".

B- Safety needs: such as security and protection from physical and emotional harm.

C- Social belonging needs: affection, acceptance, belonging, and friendly relationship, after consummated physiological, safety and security needs, "the third level of human wants is social and involves feelings of belonging".

D- "Esteem needs: internal factors like self-respect, autonomy, achievement and external factors such as status, recognition and awareness. All humans have a necessity to feel respected; this includes the need to have self- esteem and self-respect".

E- "Self-actualization: drive to achieve what one is capable of achieving. It includes growth, achieving one's potential and self-realization. What a person can be, he must be".

According to the Maslow's Hierarchy of Needs Theory "A child who is suffering from unsafe situation, lack of confidence, or lack of love and social support, helplessness or horror will naturally have their attention focused on things other than knowledge and understanding from the school or educational context" (Mawere, *et al.*, 2016).

Cianci *et al*, 2003, mentioned several important differences between Maslow and other theories that included:

1- In terms of meaning: Maslow's theory is based on the conception of human needs and their satisfaction.
2- Basis of Theory: Maslow's theory is based on the hierarchy of human needs. He identified five sets of human needs (on priority basis).
3- Nature of Theory: Maslow's theory is rather simple and descriptive; the theory is based on long experience about human needs.
4- Applicability of Theory: Maslow's theory is the most popular and widely cited theory of motivation and has wide applicability, this applies mostly in poor and developing countries.
5- Descriptive or Prescriptive: Maslow's theory is descriptive in nature.

6- Motivators: According to Maslow's model, a need will act as a motivator provided it’s not satisfied.

2.19. Social Support:

Due to the social nature of humans, they are constantly dependent on their brothers for help. Additionally, social support is a crucial factor that has a significant impact on children's lives generally. The desire for social interaction with others as a kid becomes older to support his life with love, acceptance, admiration, and belonging strengthens him to handle life's demands. Social support is thus associated with mental and physical well-being, while its absence is connected to an increase in depressed symptoms (Patel *et al*.2007).

Social support is the knowledge that one's surroundings are a source of useful social support and the presence of individuals who are interesting to the mother. Additionally, it is a source of individuals who support and care for the kid. Additionally, the child's trusted adults, including family members, friends, and neighbors (Ellis, *et al.*, 2009).

Social support is provided by people who help mothers by giving them money, supplies, equipment, skills, knowledge, guidance, and other resources to help them cope with emotional issues and participate in their roles. As a result, they will assist them in handling any stressful situations that they may encounter. Social support is often defined as the presence or accessibility of individuals we can rely on, people who communicate their concern, value, and affection for us. Bowlby's attachment hypothesis (1969, 1973, 1980).

Coheh definition Social support is the need that each person has for assistance from their surroundings. It may come from either individuals or organizations, and it helps people cope with difficult life events by allowing

them to engage in social activities (Ellis *et al*., 2009). According to Coheh (1976), the need to be in close proximity to those who can provide advice, facts, and knowledge also relates to a shared love and affection.

According to Lee et al. (2016), it is the sense of self-belonging, acceptance, and love as well as the ability to show empathy and emotionally support in trying circumstances. According to Guay (2006), the level of an individual's perception of the availability of participation and emotional support from others—such as family, friends, and relatives—as well as the provision of advice and guidance from these people and the existence of close social ties with them, is equal to the sum of the individual responses on a scale of social support.

According to Laffaye *et al*. (2008), social support is described as meeting a person's fundamental needs for respect, love, understanding, admiration, compassion, communication, knowledge and sharing worries. This term may be adjusted to include those who are significant in the individual life, particularly at times of crisis and stress.

Furthermore, the concept of social support encompasses support, severity, strengthening, and aid in coping with circumstances. set the foundation for work in the area of social support in the 1970s and offered a theory of the different social interactions. In addition to the many activities that were part of the social support process and helped people understand its worth and significance in reducing the negative impacts of stressful life events on the individual's physical and psychological components (Saltzburg, S. 2009).

Previous study

First study

A descriptive, cross-sectional study design in Babylon Province in Iraq by (Hadi, M. S., & Kassim, N. M. 2020) about Kindergartens Teacher's Knowledge and Attitudes Toward Early Detection of Autism Spectrum Disorders was conducted from the first of September 2019 to the first of May 2020. The participants were 204 teachers from two administrative departments who were chosen at random by cluster splines to participate in the study, which was conducted at kindergartens in Babylon Province. The majority of kindergarten teachers (70.6%) and those (88.2%) who had a favorable attitude toward autism spectrum disorders (ASD) had a reasonable degree of early detection expertise.

Second study

A cross-sectional study conducted at King Abdul-Aziz Medical City and National Guard primary health centers in Riyadh, Saudi Arabia by (Alharbi, 2018) about knowledge and attitude of families and health care providers towards Autism. In total (1451) respondents completed the survey. About two thirds (66.3%) of respondents were familiar with autism and their knowledge and awareness was not affected by their gender (P= 0.6) or age (p= 0.7). However, knowledge was significantly higher among those with higher education (p=0.0001) and among health care providers (p= 0.002). Only 22.7% thought that autism was curable, and 40.0 % believed that early diagnosis and intervention can help children with autism. Most respondents demonstrated positive attitudes towards children with autism (p= 0.007). The findings of this study highlight care givers and health care provider's beliefs and attitudes regarding autism.

Third study

Furthermore, as cross-sectional telephone surveys in Philadelphia by Lê-Scherban et al., 2018 United State American USA about Intergenerational Associations of Parent Adverse Childhood Experiences and Child Health Outcomes and aimed Intergenerational impacts are still being studied by researchers. Consider the possibility of cross-generational links between parent ACE exposure and worse child health, health-related behaviors, and use of and access to health care. Parents were questioned about their prior exposure to ACEs and their child's health in two population-based cross-sectional telephone surveys conducted in Philadelphia. 350 parent-child dyads made up the participants. Results of adult participants showed that 45% of them were non-Latino African Americans and 80% of them were female. Eighty-five percent of parents had just one ACE, whereas 18% had six or more. The risks of poor child overall health status (OR = 1.19; 95% confidence interval [CI]: 1.07-1.32], asthma (OR = 1.17; 95% CI: 1.05-1.30), and excessive television viewing (OR = 1.16; 95% CI: 1.05-1.28) increased with each extra parent ACE in the adjusted models.

Fourth study

Adverse childhood experiences and child health outcomes: comparing cumulative Risk and Latent Class approaches in USA by lanier et al., 2018**.** In order to understand the impact of adverse childhood experiences (ACEs), this research proposes a unique strategy that applies cutting-edge analytical techniques to determine if combinations of ACEs have distinct effects on child health outcomes. Researchers evaluate connections between classes of ACEs and child health outcomes using data from the National Survey of Children's Health. Poor health in children is predicted by class membership, with disparities reported for certain ACE combinations. Compared to all other

groups, including children exposed to three or more ACEs, a subset of children exposed to poverty and parental mental illness is more likely to need special healthcare services. The results of the research indicate that children who encounter certain ACE combinations (such as poverty and parental mental illness) are more at risk for negative health consequences. In order to identify children exposed to the most dangerous ACE combinations, physicians should do regular ACE assessments. Once these children have been identified, they should get priority for supportive treatments that are customized to their unique ACE exposure and requirements.

Fifth study

Another study which conducted in Aqaba, Jordan; by Harazni, L., & Alkaissi, A. 2016 about The Experience of Mothers and Teachers of Attention Deficit /Hyperactivity Disorder Children, and Their Management In order to create a care plan, Practices for the Behaviors of the Child: A Descriptive Phenomenological Study seeks to comprehend the management strategies employed by mothers to address the three most conspicuous symptoms of ADHD: hyperactivity, impulsivity, and inattention. In order to fully capture how the phenomena is perceived, the research employed a qualitative descriptive phenomenological approach to investigate the perspectives of main carers of ADHD children. Data gathering was The interview guide gave moms the chance to speak candidly about their experiences with their ADHD kid. Results was Three major themes emerged from the mothers' interviews and ten subthemes; (1) the burden of caring (academic track burden, activities of daily living burden, psychological and emotional burden); (2) inadequate support (lack of support from spouses and relatives, lack of support from schools, lack of support from community); (3)disturbances of the child's behavior (hyper activity, inattention,

impulsivity, hostility). The study's conclusions indicated that there are glaring deficiencies in the information, comprehension, services offered to children, and accessible support for caregivers. The provision of better family care services should be a top priority.

Sixth study

Moreover, Quantitative comparison study in Belgium by Meirsschaut et al 2010 about Parenting in families with a child with autism spectrum disorder and a typically developing child: Mothers' experiences and cognitions**.** The purpose of this study's methodologies was to assess how moms' parenting beliefs regarding their second, TD child were impacted by ASD. Participants in this research included 17 women who had both TD and an ASD child. The findings showed that mothers' parenting beliefs towards their child with ASD and their child with TD differed significantly. There were significant correlations between mothers' parenting beliefs regarding both of their children and their stress and their parenting cognitions about both their children.

Chapter Three

Methodology

Chapter Three

This chapter presents the methods that are utilized to conduct this study, that contain the administrative agreements used in the study, data collection, instrument validity and reliability, pilot study, and as well as data analysis were discussed.

3.1. Research Design

" Quantitative –descriptive cross-sectional design " is selected to confirm objectives of the research: Healthy Development & Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study through the period 10th December 2021 to 15th march 2023.

3.2. Administrative Arrangements and Ethical Consideration

A formal administrative permission was accomplished prior to data gathering for conducting the existing study as presented in Appendix (A, B, C, D, E).

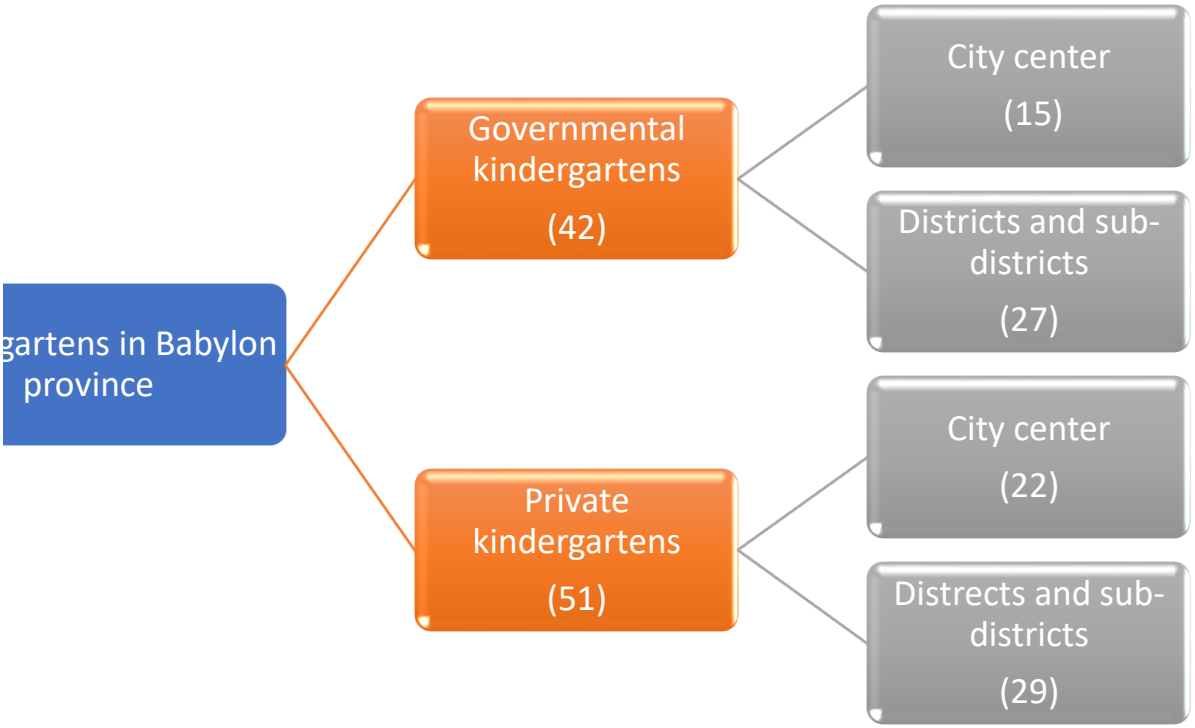
1. The initial agreement was obtained from the University of Babylon/ College of Nursing/ Higher studies committee after protocol first presentation.
2. Scientific Research and Ethical Committee at College of Nursing / University of Babylon has approved the protocol of the study.
3. A formal requisition was sent to the Babylon Education Directorate for the agreement.
4. An official agreement was attained from the department of developing and training/branch of studies and educational researches.

5. An authorized agreement was acquired from particular private centers of Autistic Spectrum Disorder (ASD) at AL-Hillah city which used as settings of the study.

In order to maintain the ethical consideration for the present study accomplishment, the researcher makes a visit to become acquainted with the staff and present a brief explanation about the study by face to face meeting with the directors of selected centers and kindergartens, to obtain the agreement and cooperation of teachers who work there. Finally, the researcher obtained verbal approval from the Mothers of children with ASD themselves to involve freely engage in the research.

3.3. Research Setting

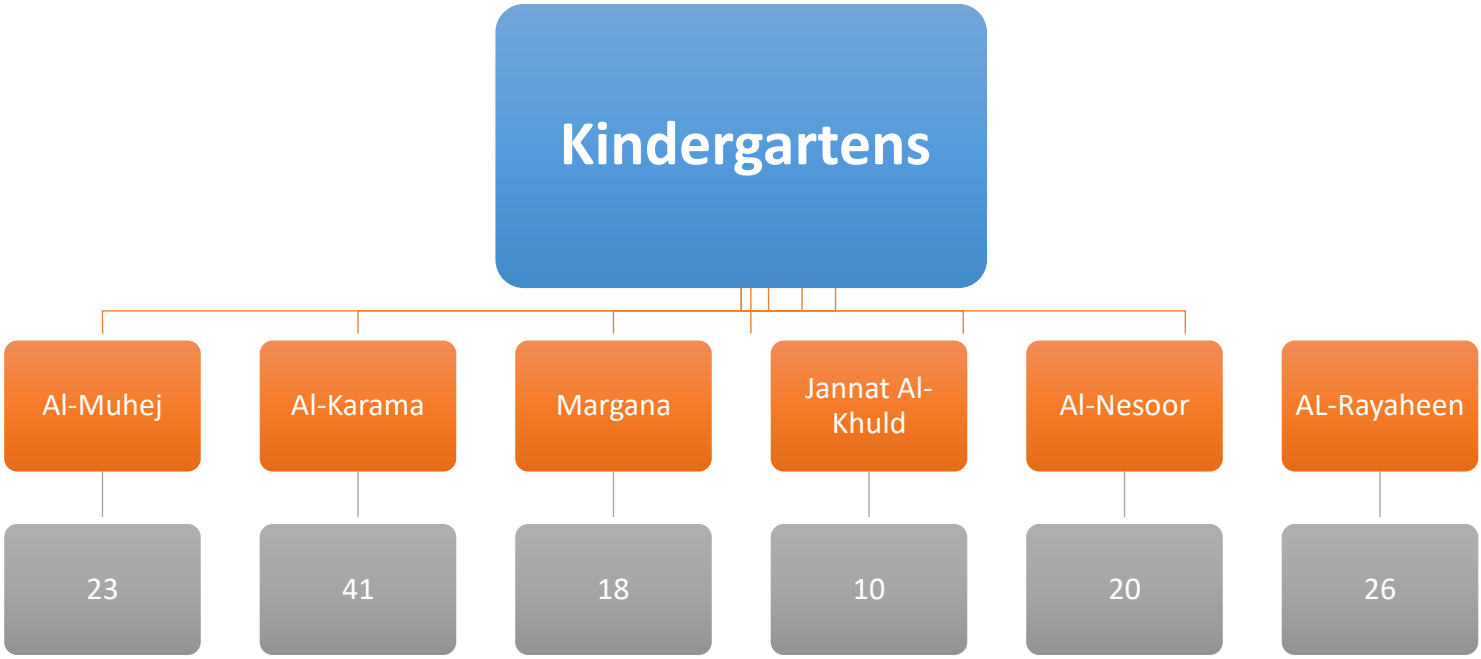
The research was conducted in Babylon province at AL-Hillah city, which included kindergartens and autism centers. The total number of governmental kindergartens in Babylon province is (42) which include (15) of them in the city center and (27) ones in districts and sub-districts, as well as, the total number of private kindergartens that are registered in the Babylon directorate of education are (51) as total distributed in four administrative departments (22) of which are only in the city of Al-Hillah as shown in following figure.



The researcher selected three governmental kindergartens (Al-Muhaj, Al-Rayaheen and Al-Karama) and four private kindergartens (Morgana, Jannat Al-Khald, Al-Nesoor, and Babylon earth) for healthy children in AL-Hilla city. In other side the researcher also takes all centers for Rehabilitation of children with ASD. These centers are: The Hussainiya Holy Shrine Institute in Babylon, Babylon Autism Center, Al-Rahma Specialized Center, Autism Babylon Institute for People with Special Needs, AL-Khansa Product Institute, Specialist Sura Rasheed Haroun Center for Autism Care, International Flowers institution.

3.4. Sample of the study

Purposive - non-probability sample was selected to carry out the study which consist of (138) mothers who have children in Kindergartens and (133) mothers who have children with ASD in AL-Hillah city.




ASD Centers
Hussainiya Holy Shrine Institute
Autism Babylon Institute for People with Special Needs
Al-Rahma Specialized Center
Al-Khansa Product Institute
International Flowers institution
Specialist Sura Rasheed Haroun Center for Autism Care
40
24
5
31
16
17

3.5. Inclusion Criteria for the Sample

- Mothers who have child with ASD must be aged between 3-6 years of age.
- Mothers who agree to participate in the study.
- Free from any communication disturbance.

3.6. The Study instrument:

In order to collect the data, the researcher adopt a tool from extensive literature review to find out Healthy Development and Autistic Spectrum Disorder in Children Related to Mother Experience in Early Childhood: A Comparative Study. The questionnaire of the study consists five parts Appendixes (F).

- **Part I: Demographical Data**

The demographical data are divided into two parts, the first part related to the child, which consist of (10) items includes: age of child, gender, Type of delivery for Child, The weight of the child at birth, The sequence of the child in the family, The child's age at diagnosis, Type of Child Feeding, The current weight of the child, Sleep Hours, And family history of the disease. The second part related to mother which consist of (6) items includes: Mother's age, Marital status, Educational Status, Mother's employment, Residency, and use of medicines as contraceptives.

Part II: Risk Factors

The second part of questionnaire is the risk factor that include (3) parts such as: During pregnancy for mothers, During childbirth for child, and During Early childhood.

Part III: Mothers experience toward cognitive achievement

The third part of questionnaire is titled as Mothers experience toward cognitive achievement that include (19) items related to experience of mother toward cognitive achievement.

Part IV: Mothers experience toward Social and Motor Achievement.

The fourth part of questionnaire which consists of (20) items to measure the Mothers experience toward Social and Motor Achievement.

Part V: Mothers experience toward emotions Achievement

The fifth part of questionnaire which consists of (9) items to measure the Mothers experience toward emotions Achievement.

3.7. Rating and scoring:

Three points Likert rating to mother's experience regarding ASD toward cognitive achievement, Social and Motor Achievement and emotions Achievement were used as Never scored as (1), Sometimes scored as (2), Always which take (3).

3.8. Validity of the instrument of study:

The questionnaire validated through exposure of the tool to (18) expert, from different fields, with no less than (10) years of experience in investigating the specificity, validity and adequacy of the questionnaire to assess the concept of interest, all of its recommendations have been taken into account. There are (7) from the College of Nursing / University of Babylon, (4) from the College of Nursing / University of Baghdad, (1) from the University of Karbala, (3) from the Al- Kufa University, (1) from Kirkuk University, (1) from Al- Mosul University, and (1) from Dhi Qar University, Changes and modification performed according to the advises

and opinion of the expert in order to reach the proper degree of understanding, clearness, and relevance questionnaire to facilitate data collection for carrying out the study objectives .Appendix (G).

3.9 Pilot of the study:

The pilot study was carried out on (28) mothers (14) from Babylon earth kindergarten and (14) from Babylon Autism center in the Babylon province from the period 25 July to 7 August 2022. The basic study sample did not include this sample. The following issues were to be addressed by the pilot study:

1. The tool's reliability.
2. An estimate of the time needed to collect the data.
3. Identification of barriers which may not be counted during the data collection process.
4. Identification of the accuracy and appropriateness of the sampling.

The pilot study result was:

1. The tool is reliable.
2. The questionnaire's items are clear and can be understood easily.
3. The period required to complete the instrument's questions ranged from (3-4) months.

3.10 Study instrument reliability:

Reliability is concerned with a testing instrument being consistent and reliable in calculating a variable. Alpha Cronbach used as a statistical tool to achieve the reliability of the questionnaire; the result was (0.93) which is statistically acceptable as shown in the table below

Groups	No.	Number of items	Alpha Cronbach	Assessment
Healthy mothers	14	47	0.93	Pass
Autistic spectrum disorder mother	14			

3.11 Methods of data collection

Data were collected after acquiring an official agreement from the department of development and a training / branch of studies and educational research in Babylon education directorate (Appendix B), through using research instruments in the period from 9th August 2022 to 29th November 2022, kindergartens and centers of ASD used as an area to collect the data from the mothers. The researcher put her phone number on the questionnaire, taking into account the explanation of the objectives and importance of the study, and making sure that the data taken will be kept strictly confidential. Data was collected by giving the questionnaires to the managers as an intermediary to hand them over to the mothers, who then fill them in returned it back to the manage. Total data collected at the end were (138) from kindergartens and (133) from centers of ASD.

3.12. Analysis of Statistical

Tabulation of collection data analyzed by many statistical approaches, in order to obtain a study result via Statistical Package for the Social Science (SPSS) ver. (24) and Microsoft Excel (2010).

3.12.1. Descriptive Statistical Methods

- Percentages and Frequencies used.

- Mean scores, stander deviation SD, were used as statistical methods to reach the objectives.

3.12.2. Inferential Statistic

The following statistical methods used to obtain the objectives of the study:

a- Reliability Alpha Cronbach used.
b- Chi-Square test used to test distribution of the observed frequencies independence, and for measuring the relationship between variables of the studies according to its kind.
c- Finding out the relationship among variable chi-square test.
d- T-test to find out the differentiations between groups.
e- Correlation coefficient to find out the correlation between variables

3.13 Limitations of the study:

Throughout the study area, the researcher encountered some difficulties such as:

1- The difficulty of accessing kindergartens and ASD centers due to the distance between them and the lack of accurate evidence of their location.
2- Most of the mothers refused to cooperate with the researcher for security reasons and social traditions, as most families consider that the presence of a child with ASD is stigma for society and they are ashamed of it Whereas, due to the mothers' neglect of the study questionnaire, it led to a small number of the participants compared to the actual number registered in the centers, whether they were in the private or government.
3- Lack of time in collecting data, especially in government kindergarten.

Chapter Four

Results

Chapter four

Study Results

In order to find out the comparison between the healthy and autistic spectrum disorder from the level of mothers' knowledge, data were collected from mothers the respondents by using specific instrument prepared for the stated purposes. Many statistical approaches were employed to determine the result and significant changes between variables.

Table (4.1): Distribution of children Demographic characteristics of the study sample.

Demographic characteristics	Rating and intervals	Healthy Children		ASD Children	
		Frequency	%	Frequency	%
Age / Years	3	7	5.1	16	12.0
	4	34	24.6	35	26.3
	5	**64**	**46.4**	30	22.6
	6	33	23.9	**52**	**39.1**
	M ± Std	**4.89 ± 0.626**		**5.72 ± 1.064**	
	Total	138	100.0	133	100.0
Sex	Male	**74**	**53.6**	**94**	**70.7**
	Female	64	46.4	39	29.3
	Total	138	100.0	133	100.0
Type of Delivery for Child	Normal vaginal delivery	**72**	**52.2**	59	44.4
	Cesarean section	65	47.1	**71**	**53.4**
	Others	1	.7	3	2.3
	Total	138	100.0	133	100.0
Weight of the child at birth	Low birth weight (Less than 2. KG)	46	33.3	57	41.3
	Normal birth Weight (2.7 - 4.2 KG)	**87**	**63.0**	**76**	**55.1**
	Hight birth weight (More than 4.3 KG)	5	3.6	-	-
	M ± Std	**2.97 ± 0.659**		**2.72 ± 0.674**	
	Total	138	100.0	133	100.0
	First	**58**	**42.0**	**54**	**40.6**
	Second	36	26.1	37	27.8

The sequence of the child in the family	Third	26	18.8	23	17.3
	More than three	18	13.1	19	14.3
	Total	138	100.0	133	100.0
The child's age at diagnosis	3	--	--	**95**	**71.4**
	4	--	--	21	15.8
	5	--	--	16	12
	6	--	--	1	0.8
	M ± Std	-----		**3.39 ± 0.758**	
	Total	138	100.0	133	100.0
Type of Child Feeding	Breastfeeding	**63**	**45.7**	44	33.1
	Artificial	33	23.9	**47**	**35.3**
	Mixed	42	30.4	42	31.6
	Total	138	100.0	133	100.0
Sleep Hours	less than 10 Hours	**83**	**60.1**	**99**	**74.4**
	10 - 12 Hours	54	39.1	26	19.5
	more than 12 hours	1	.7	8	6.0
	M ± Std	**9.28 ± 1.504**		**8.76 ± 2.220**	
	Total	138	100.0	133	100.0
Family History of the Disease	Yes	3	2.2	30	22.6
	No	**135**	**97.8**	**103**	**77.4**
	Total	138	100.0	133	100.0

% = percentage, MS= mean of score, Std = standard deviation

The demographical data shown above as (271) children distributed as (138) of healthy child and (133) of autistic spectrum disorder child. Related to their ages, that most healthy children 64 (46.4%) at 5 years old had a mean and standard deviation of 4.89 ± 0.626, while 52 (39.1%) of autistic spectrum disorder children at 6 years old had a mean and standard deviation of 5.72 ± 1.064. Related to gender, illustrate that most of the study sample in both groups 74 (53.6%), 94 (70.7%) were male gender. In terms of delivery method, most healthy children—72 (52.2%) had normal vaginal deliveries, while 71 (53.4%) of autistic spectrum disorder children had cesarean section deliveries. In addition, both groups, 87 (63.0%) and 76 (55.1%), had normal birth weights (2.7–4.2 KG). 58 (42.0%), 54 (40.6%) of both groups recorded the first child as a sequence in the family. Also, it shows that there were 95 (71.4%) children with autism spectrum disorder diagnosed at 3 years old, with

a mean and standard deviation of 3.39 ± 0.758. 63 (45.7%) healthy children were breastfed, while most of the autistic spectrum disorder children recorded artificial feeding at 47 (35.3%). On other side this table show that children of both group with less than 10 hours sleep per day with mean and stander deviation 8.76 ± 2.22. In addition to both groups (healthy and autistic spectrum disorder) have no history for disease 135 (97.8%), 103 (77.4%).

Table (4.2): Distribution of Mothers Demographic characteristics of the study sample.

Demographic characteristics	Rating and intervals	Mothers of Healthy Children		Mothers of ASD Children		P.Value
		Frequency	%	Frequency	%	
Age / Years	20-29	59	42.8	42	31.6	0.023
	30-39	**72**	**52.2**	**69**	**51.9**	
	40-49	7	5.1	22	16.5	
	M ± Std	**30.81 ± 5.019**		**32.39 ± 6.338**		
	Total	138	100.0	133	100.0	
Marital status	Married	**126**	**91.3**	**124**	**93.2**	0.678
	Widow	3	2.2	3	2.3	
	Separate	6	4.3	2	1.5	
	Divorced	3	2.2	4	3.0	
	Total	138	100.0	133	100.0	
Educational Status	Able to Read and write	12	8.7	7	5.3	0.351
	Elementary graduate	16	11.6	9	6.8	
	Intermediate graduate	16	11.6	20	15.0	
	Secondary school Graduate	17	12.3	24	18.0	
	Diploma	2	1.4	1	0.8	
	Bachelor's degree or more	**75**	**54.3**	**72**	**54.1**	
	Total	138	100.0	133	100.0	

Mother's Employment	Employee	52	37.7	51	38.3	0.804
	Housewife	**86**	**62.3**	**82**	**61.7**	
	Total	138	100.0	133	100.0	
Use of medications as contraceptives	No	**86**	**62.3**	**98**	**73.7**	.045
	Yes	52	37.7	35	26.3	
	Total	138	100.0	133	100.0	

% = percentage, MS= mean of score, Std = standard deviation

The demographic data in table (4-2) display that the majority of the mothers in both groups, 72 (52.2%) and 69 (51.9%), were between the ages of (30-39) years old, 126 (91.3%), 124 (93.2%) were married. Related to educational status, 75 (54.3%) and 72 (54.1%) were a bachelor's degree or more in both groups. According to their mothers' employment, 86 (62.3%) and 82 (61.7%) of both groups were housewives. In both groups, 86 (62.3%) and 98 (73.7%) of the mothers do not use contraception medications.

Table (4.3): Distribution of the study sample related to Mothers risk factor during pregnancy.

N	Items	Mothers of Healthy Children		Mothers of ASD Children	
		Frequency	Percent	Frequency	Percent
1.	**Hypertension**	16	32.7	**16**	**25.8**
2.	**Gestational diabetes**	7	14.3	6	9.7
3.	**Obesity**	**17**	**34.7**	11	17.7
4.	**Smoking**	3	6.1	0	0
5.	**Hypertension and Gestational diabetes**	--	--	4	6.5
6.	**Hypertension and Obesity**	6	12.2	15	24.2
7.	**Hypertension, Gestational diabetes and Obesity**	--	--	8	12.9
8.	**Hypertension, Gestational diabetes, Obesity and Smoking**	--	--	2	3.2
Total		**49**	**100**	**62**	**100**

According to Mothers risk factor during pregnancy, table demonstrate a high percentage of the healthy mother's group 17 (34.7%) were obesity, while the high percentage for autistic spectrum disorder mothers' group 16 (25.8%) have hypertension.

Table (4.4): Distribution of the study sample related to child risk factor during childbirth.

N	Items	Healthy Children		ASD Children	
		Frequency	Percent	Frequency	Percent
1.	**Prematurity**	8	19.5	14	20.3
2.	**Fetal distress**	**12**	**29.3**	**27**	**39.1**
3.	**Perinatal asphyxia**	3	7.3	3	4.3
4.	**Aspiration amniotic fluid**	2	4.9	3	4.3
5.	**Aspiration meconium**	--	--	--	--
6.	**Genetic factors (Twins)**	4	9.8	4	5.8
7.	**Prematurity and Fetal distress**	3	7.3	5	7.2
8.	**Fetal distress and Genetic factors (Twins)**	--	--	8	11.6
9.	**Prematurity, Perinatal asphyxia and Aspiration amniotic fluid**	--	--	3	4.3
10.	**Fetal distress, Aspiration amniotic fluid and Genetic factors (Twins)**	2	4.9	--	--
11.	**Perinatal asphyxia, Aspiration meconium and Genetic factors (Twins)**	3	7.3	--	--
12.	**Prematurity, Fetal distress, Perinatal asphyxia, Aspiration amniotic fluid and Aspiration meconium**	4	9.8	2	3.1
Total		**41**	**100**	**69**	**100**

According to child risk factors during childbirth, it show a high percentage of the both groups 12 (29.3%), 27 (39.1%) were from fetal distress.

Table (4.5): Distribution of the study sample related to risk factor during early childhood.

N	Items	Healthy Children		ASD Children	
		Frequency	Percent	Frequency	Percent
1.	He eats a lot of canned foods	5	6.4	4	4.5
2.	Fast food is part of his daily main meals	4	5.1	7	8.0
3.	The child's nutritional routine includes a lot of sugars and artificial sweeteners	25	**32.1**	**23**	**26.1**
4.	Parental rejection	4	5.1	12	13.6
5.	Child stress from (sudden death, separation or divorce)	2	2.6	8	9.1
6.	He eats a lot of canned foods and includes a lot of sugars and artificial sweeteners	6	7.7	6	6.8
7.	The child's nutritional routine includes a lot of sugars and artificial sweeteners and Parental rejection	5	6.4	7	8.0
8.	He eats a lot of canned foods; Fast food is part of his daily main meals and the child's nutritional routine includes a lot of sugars and artificial sweeteners	12	15.4	11	12.5
9.	Fast food is part of his daily main meals and the child's nutritional routine includes a lot of sugars and artificial sweeteners	15	19.2	10	11.4
Total		**78**	**100**	**88**	**100**

According to risk factors in early childhood, the table above express a high percentage of the both groups 25 (32.1%), 23 (26.1%) were the child's nutritional routine includes a lot of sugars and artificial sweeteners.

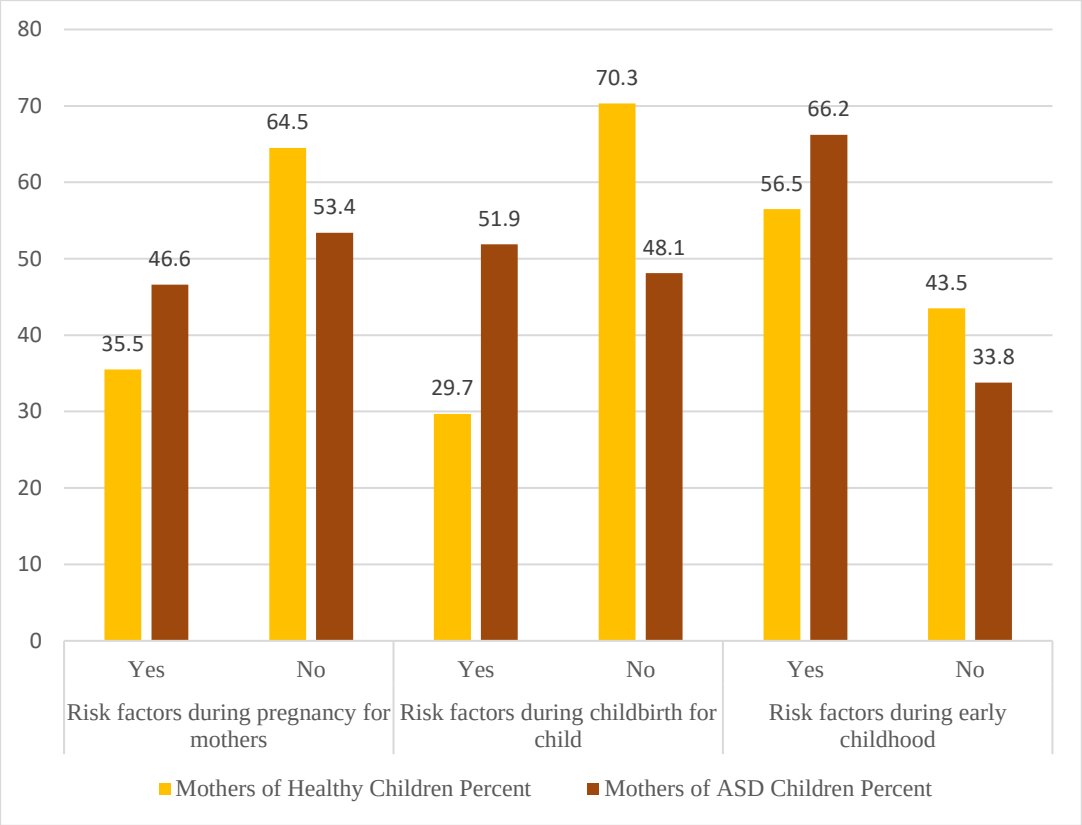


Figure (4.1): Distribution of the study sample related to risk factor for mothers and children (Healthy and Autistic Spectrum Disorder).

Table (4.6): Assessment of the responses of study sample (mothers of healthy child and Autistic Spectrum Disorder) related to mother's experience toward cognitive achievement.

N	Items	Mothers of Healthy Children		Mothers of ASD Children	
		M	± Std	M	± Std
1.	Shout at him because he is weak in the ability to focus and attention.	1.58	0.614	2.30	0.651
2.	Speak to him out loud to wake up from wandering and daydreaming.	1.44	0.694	2.35	0.780

3.	Use the words of a command to accomplish its tasks.	1.56	0.604	2.13	0.679
4.	More than advice and preaching when confused and suffers from confusion.	1.62	0.785	2.22	0.742
5.	The pain when it moves from one starch to another without justification.	1.62	0.653	2.71	0.545
6.	I yell at him because he doesn't make eye contact with me when he talks to me.	1.36	0.538	2.46	0.713
7.	Get angry at him when he does not listen or listen to the instructions given to him.	1.83	0.611	2.73	0.479
8.	I get annoyed when he is preoccupied with himself, his fingers, his clothes or his hair.	1.51	0.664	2.64	0.582
9.	Make it easier to lead by command.	1.38	0.596	2.54	0.669
10.	Deprive him of the things that arouse him and distract him.	1.79	0.709	2.74	0.475
11.	The blame is because he always forgets his own things and tools.	1.69	0.723	2.69	0.580
12.	I advise a lot so that he does not get into accidents because of his lack of attention.	2.23	0.813	2.67	0.560
13.	Deprive him of playing time when he fails to organize his day's tasks.	1.62	0.737	2.40	0.728
14.	I get annoyed with him because he has little appetite.	1.43	0.591	2.52	0.681
15.	Shout at him because he's slow to eat.	1.62	0.766	2.51	0.670
16.	More than blaming him for rushing to answer the question before it is completed.	1.41	0.625	2.41	0.780
17.	Reprimand him for failing to complete tasks and unable to follow up on details.	1.43	0.604	2.42	0.741
18.	More than advised him because he makes an inappropriate noise when he shouldn't	1.54	0.652	2.11	0.731

19.	Make fun of him because he is a slow learner.	1.22	0.509	2.41	0.808
General mean and SD		**1.57**	**0.219**	**2.47**	**0.196**
Assessment		**Never**		**Always**	
No.		**138**		**133**	

M= mean of scores, Std= (stander deviation), cut off point= 0.66, mean of scores = 2, (Never= 1-1.66), (sometime = 1.67-2.33), (Always =2.34 – 3).

This table presents the statistical analysis for mothers of healthy child and autistic spectrum disorder related to their experience toward cognitive achievement, the results shows the general mean and SD for mothers of healthy children group were (1.57 ± 0.219), while the results shows that the general mean and SD for mothers of autistic spectrum disorder group were (2.47 ± 0.196).

Table (4.8): Overall Assessment of the responses of study sample (Mothers of Healthy child and Autistic Spectrum Disorder) related to mother's experience toward cognitive achievement.

Main domain	Rating	F	%	M.S	S.D	Ass
Mothers of Healthy Children	Poor Experience	13	9.4	**1.57**	0.219	**Good**
	Good Experience	125	90.6			
	Total	138	100			
Mothers of ASD Children	Poor Experience	122	91.7	**2.47**	0.196	**Poor**
	Good Experience	11	8.3			

	Total	133	100			

Mean of scale = (2), Cut of point = (1), Good Experience (1- 2), Poor Experience (2.1 -3).

It illustrates that overall assessment for mother's experience of healthy children were good at mean and stander deviation (1.57 ± 0.219), while mothers experiences of autistic spectrum disorder children were poor at mean and stander deviation (2.47 ± 0.196).

Table (4.9): Overall score study group (Mothers of Healthy Children and Mothers of ASD Children) related to Mothers experience toward cognitive achievement.

Groups	No.	Minimum score	Maximum score	Mean of score	Stander deviation	ASS
Mothers of Healthy Children	138	19	45	**29.90**	6.048	**Good Experience**
Mothers of ASD Children	133	26	57	**46.95**	3.944	**Poor Experience**

Cut of point (19), Good Experience (19- 37), Poor Experience (38 - 57).

Overall assessment for mother's experience of healthy children were good at mean of score and stander deviation (29.90 ± 6.048), while mothers experiences of autistic spectrum disorder children were poor at mean of score and stander deviation (46.95 ± 3.944).

Table (4.10): Comparison between the mean score of both group (mothers of healthy child and autistic spectrum disorder) related to mother's experiences toward cognitive achievement.

Independent Sample T-Test						
Groups	**No.**	**M**	**Std.**	**Std. E**	**P- value**	**Assessment**
Mothers of Healthy Children	138	29.90	6.048	.515	**0.001**	**H. S**
Mothers of ASD Children	133	46.95	3.944	.342		

No.= (number of study sample), M= mean, Std= (stander deviation), Std. E= (stander error), P. value= (probability value), H. S= (Highly Significant).

This table shows the comparison between mother's experience related to their children of both group (healthy and ASD) the recorder mean score shows highly significant differences between the responses (P. value = 0.001).

Table (4.11): Assessment of the responses of study sample (mothers of healthy child and ASD) related to Mothers experiences toward Social and Motor Achievement.

N	Items	Mothers of Healthy Children		Mothers of ASD Children	
		M	**± Std**	**M**	**± Std**
1.	Threaten him not to go out again when he runs and jumps and climbs.	1.86	0.740	2.11	0.751
2.	I promise to hit him when he does things rejected by others.	1.57	0.661	2.08	0.692

3.	Ban him from raising animals because he is cruel to them.	1.48	0.727	2.06	0.851
4.	I scold him for being too bored and always standing up and ready to go.	1.49	0.619	2.26	0.785
5.	Punish him when he behaves childishly and immaturely.	1.61	0.644	2.32	0.644
6.	Shout to him when he resists rules and regulations and breaks deadlines.	1.57	0.591	2.23	0.717
7.	Blame when he refuses to cooperate with his brothers or others.	1.92	0.684	2.25	0.690
8.	Hit him when he steals something from his brothers or others.	1.59	0.752	2.17	0.821
9.	Argue him when he obeys orders resentfully or resentfully.	1.78	0.625	2.27	0.629
10.	Describe him in harsh words when he commits acts of vandalism or brutality.	1.45	0.617	2.14	0.740
11.	Sentence him when he is rebellious, disobedient or stubborn.	1.75	0.671	2.23	0.706
12.	I compare him with his brothers and friends because his words are not clear and different.	1.29	0.529	2.25	0.802
13.	I punish him because he refuses to apologize when he makes a mistake.	1.67	0.687	2.17	0.691
14.	Punish him when he damages his toys or scatter them.	1.71	0.675	2.20	0.637
15.	Shout at him when he insists on meeting his demands at once.	1.73	0.668	2.26	0.635
16.	I call him nicknames that annoy him when he quarrels and naughty.	1.14	0.386	1.95	0.801
17.	I punish him because he loves to fight and is always in a state of anger, rage and resentment	1.56	0.662	2.27	0.760
18.	Deprive him of playing time when he jumps on furniture and keeps running and climbing.	1.56	0.673	2.15	0.744
19.	Insist on him to admit his mistakes and investigate him a lot	1.75	0.753	2.27	0.708
20.	More than a reprimand because it is impulsive and easy to provoke.	1.54	0.727	2.41	0.686

General mean and SD	**1.60**	**0.185**	**2.20**	**0.102**
Assessment	**Never**		**Sometime**	
No.	**138**		**133**	

M= mean of scores, Std= (stander deviation), cut off point= 0.66, mean of scores = 2, (Never= 1-1.66), (sometime = 1.67-2.33), (Always =2.34 – 3).

This table presents the statistical analysis for mothers of healthy child and autistic spectrum disorder related to their experiences toward social and motor achievement, the results in this table shows the general mean and SD for mothers of healthy children group were (1.60 ± 0.185), while the results shows that the general mean and SD for mothers of autistic spectrum disorder group were (2.20 ± 0.102).

Table (4.12): Overall Assessment of the responses of study sample (mothers of healthy child and ASD) related to Mothers experience toward Social and Motor Achievement.

Main domain	Rating	F	%	M.S	S.D	Ass
Mothers of Healthy Children	Poor	17	12.3	1.60	0.185	**Good**
	Good	121	87.7			
	Total	138	100			
Mothers of ASD Children	Poor	86	64.7	2.20	0.102	**Poor**
	Good	47	35.3			
	Total	133	100			

Mean of scale = (2), Cut of point = (1), Good Experience (1- 2), Poor Experience (2.1 -3).

The results in this table show that overall assessment for mother's experience of healthy children were good at mean and stander deviation (1.60 ± 0.185), while mothers experiences of autistic spectrum disorder children were poor at mean and stander deviation (2.20 ± 0.102).

Table (4.13): Overall score study group (mothers of healthy child and ASD) related to Mothers experiences about Social and Motor Achievement.

Groups	No.	Minimum score	Maximum score	Mean of score	Stander deviation	ASS
Mothers of Healthy Children	138	20	49	32.00	7.377	Good Experience
Mothers of ASD Children	133	26	59	44.04	7.383	Poor Experience

Cut of point (20), Good Experience (20- 39), Poor Experience (40 - 60).

The results in this table show that overall assessment for mother's experiences of healthy children related to social and motor achievement were good at mean of score and stander deviation (32.00 ± 7.377), while mothers experiences of autistic spectrum disorder children were poor at mean of score and stander deviation (44.04 ± 7.383).

Table (4.14): Comparison between the mean score of both group (mothers of healthy child and autistic spectrum disorder) related to Mothers experience about Social and Motor Achievement.

Independent Sample T-Test						
Groups	**No.**	**M**	**Std.**	**Std. E**	**P- value**	**Assessment**
Mothers of Healthy Children	138	32.00	7.377	.628	**0.001**	**H. S**
Mothers of ASD Children	133	44.04	7.383	.640		

No= (number of study sample), M= mean, Std= (stander deviation), Std. E= (stander error), P. value= (probability value), H. S= (Highly Significant)

This table shows the comparison between mother's experiences related to their children of both group (healthy and ASD) the recorder mean score shows highly significant differences between the responses (P. value = 0.001).

Table (4.15) Assessment of the responses of study sample (mothers of healthy child and ASD) related to Mothers experiences toward emotional achievement.

N	Items	Mothers of Healthy Children		Mothers of ASD Children	
		M	± Std	M	± Std
1.	I scold him because he stays up late and refuses to sleep early.	1.85	0.744	2.43	0.655
2.	I punish him when he tells untrue or false stories.	1.68	0.774	2.20	0.802
3.	I compare him to his brothers when he avoids difficult tasks that require physical or mental effort.	1.41	0.613	2.38	0.725
4.	I make fun of him for being very sensitive and quick to cry when he criticizes him	1.31	0.551	2.26	0.832
5.	Exaggerating in showing love and attention to his brother / sister in order to attract his attention and arouse his affection.	1.29	0.529	2.30	0.759
6.	Make fun of him when he sucks or chews his finger, clothes, or blanket.	1.44	0.616	2.36	0.711
7.	More than a reprimand because it is difficult to make friends with others or communicate with them.	1.45	0.716	2.37	0.773
8.	Shout at him when he can't get along with his siblings or others.	1.37	0.580	2.28	0.762
9.	Hit him when he explodes his emotions and occurs unexpected behavior.	1.39	0.572	2.38	0.693

General mean and SD	1.46	0.182	2.32	0.073
Assessment	Never		Sometime	
No.	138		133	

M= mean of scores, Std= (stander deviation), cut off point= 0.66, mean of scores = 2, (Never= 1-1.66), (sometime = 1.67-2.33), (Always =2.34 – 3).

This table presents the statistical analysis for mothers of healthy child and autistic spectrum disorder related to their experiences toward social and motor achievement, the results in this table shows the general mean and SD for mothers of healthy children group were (1.46 ± 0.182), while the results shows that the general mean and SD for mothers of autistic spectrum disorder group were (2.32 ± 0.073).

Table (4.16): Overall Assessment of the responses of study sample (mothers of healthy child and ASD) related to Mothers experience toward emotional achievement.

Main domain	Rating	F	%	M.S	S.D	Ass
Mothers of Healthy Children	Poor	20	14.5	1.46	0.182	Good
	Good	118	85.5			
	Total	138	100			
Mothers of ASD Children	Poor	99	74.4	2.32	0.073	Poor
	Good	34	25.6			
	Total	133	100			

Mean of scale = (2), Cut of point = (1), Good Experience (1- 2), Poor Experience (2.1 -3).

The results in this table show that overall assessment for mother's experiences of healthy children were good at mean and stander deviation (1.46 ± 0.182), while mothers experiences of autistic spectrum disorder children were poor at mean and stander deviation (2.32 ± 0.073).

Table (4.17): Overall score study group (mothers of healthy child and autistic spectrum disorder) related to Mothers experience about emotional Achievement.

Groups	No.	Minimum score	Maximum score	Mean of score	Stander deviation	ASS
Mothers of Healthy Children	138	9	22	13.20	3.398	Good Experience
Mothers of ASD Children	133	11	27	20.95	4.445	Poor Experience

Cut of point (9), Good Experience (9- 17), Poor Experience (18 - 27).

The results in this table show that overall assessment for mother's experiences of healthy children related to social and motor achievement were good at mean of score and stander deviation (13.20± 7.377), while mothers experiences of autistic spectrum disorder children were poor at mean of score and stander deviation (20.95± 4.445).

Table (4.18): Comparison between the mean score of both group (mothers of healthy child and autistic spectrum disorder) related to Mothers experiences about emotional Achievement.

Independent Sample T-Test						
Groups	**No.**	**M**	**Std.**	**Std. E**	**P- value**	**Assessment**
Mothers of Healthy Children	138	13.20	3.398	.289	**0.001**	**H. S**
Mothers of ASD Children	133	20.95	4.445	.385		

No= (number of study sample), M= mean, Std= (stander deviation), Std. E= (stander error), P. value= (probability value), H. S= (Highly-Significant).

The comparison in table above; between mother's experiences related to their children of both group (healthy and ASD) the recorder mean score shows highly significant differences between the responses (P. value = 0.001).

Table (4.19): Overall Assessment of the responses of study sample (mothers of healthy child and ASD) related to Mothers experience toward cognitive, Social and Motor and emotional Achievements.

Main domain	Rating	F	%	M.S	S.D	Ass
Mothers of Healthy Children	Poor	11	8.0	1.54	0.068	Good
	Good	127	92.0			
	Total	138	100			
Mothers of ASD Children	Poor	117	88.0	2.33	0.134	Poor
	Good	16	12.0			
	Total	133	100			

Mean of scale = (2), Cut of point = (1), Good Experience (1- 2), Poor Experience (2.1 -3).

The results in this table show that overall assessment for mother's experiences of healthy children were good at mean and stander deviation (1.54 ± 0.068), while mothers experiences of autistic spectrum disorder children were poor at mean and stander deviation (2.33 ± 0.134).

Table (4.20): Comparison between the mean score of both group (mothers of healthy child and autistic spectrum disorder) related to their experience toward cognitive, social and motor and emotional Achievements.

Independent Sample T-Test						
Groups	**No.**	**M**	**Std.**	**Std. E**	**P- value**	**Assessment**
Mothers of Healthy Children	138	71.09	15.153	1.290	**0.001**	**H. S**
Mothers of ASD Children	133	111.95	10.370	0.899		

No= (number of study sample), M= mean, Std= (standard deviation), Std. E= (stander error), P. value= (probability value), H. S= (Highly-Significant).

This table shows the comparison between mother's experiences related to their children of both group (healthy and ASD) the recorder mean score shows highly significant differences between the responses toward cognitive, social and motor and emotional Achievements at (P. value = 0.001).

Table (4.21): Relationship between Mothers experience of Healthy Children and ASD Children.

	Mean	**Std. Deviation**	**N**	**Pearson Correlation (*r*)**	**P-Value**	**Assessment**
Mothers of Healthy Children	71.09	15.153	138	0.119	0.164	Positive Mild relationship (N. S)
Mothers of ASD Children	111.95	10.370	133			

Pearson's (*r*) correlation coefficient is statistical analysis method used in both types descriptive and inferential statistic in order to determine how two variables are related to one another with ratio scale. Also, it shows non-significant relationship between mothers of healthy and autistic spectrum disorder children toward their experiences at P-Value 0.164 which more than 0.05.

Table (4.22): Relationship between mother's experiences of healthy child and child demographical characteristic.

Demographical Characteristic	Value		Good Experience	Poor Experience	Total	Chi-Square Tests	d.f	P.value ASS
Child age \ year	3	F	5	2	7	4.567	3	0.206 N.S
		%	71.4%	28.6%	100.0%			
	4	F	32	2	34			
		%	94.1%	5.9%	100.0%			
	5	F	60	4	64			
		%	93.8%	6.3%	100.0%			
	6	F	30	3	33			
		%	90.9%	9.1%	100.0%			
	Total	F	127	11	138			
		%	92.0%	8.0%	100.0%			
Gender	Male	F	69	5	74	.321	1	0.571 N.S
		%	93.2%	6.8%	100.0%			
	Female	F	58	6	64			
		%	90.6%	9.4%	100.0%			
	Total	F	127	11	138			
		%	92.0%	8.0%	100.0%			
Type of delivery for Child	Normal vaginal delivery	F	66	6	72	.106	2	0.948 N.S
		%	91.7%	8.3%	100.0%			
	Cesarean section	F	60	5	65			
		%	92.3%	7.7%	100.0%			
	Others	F	1	0	1			
		%	100.0%	0.0%	100.0%			
	Total	F	127	11	138			
		%	92.0%	8.0%	100.0%			

Weight of the child at birth	Low birth weight (Less than 2. KG)	**F**	39	7	46	5.075	2	**0.029 S**
		%	84.8%	15.2%	100.0%			
	Normal birth Weight (2.7 - 4.2 KG)	**F**	83	4	87			
		%	95.4%	4.6%	100.0%			
	Hight birth weight	**F**	5	0	5			
		%	100.0%	0.0%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
The sequence of the child in the family	**1**	**F**	54	4	58	.721	3	0.982 N.S
		%	93.1%	6.9%	100.0%			
	2	**F**	33	3	36			
		%	91.7%	8.3%	100.0%			
	3	**F**	24	2	26			
		%	92.3%	7.7%	100.0%			
	More than 3	**F**	18	2	20			
		%	87.5%	12.5%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
Type of Child Feeding	**Breast feeding**	**F**	58	5	63	.302	2	0.860 N.S
		%	92.1%	7.9%	100.0%			
	Artificial	**F**	31	2	33			
		%	93.9%	6.1%	100.0%			
	Mixed Breast feeding	**F**	38	4	42			
		%	90.5%	9.5%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
Sleep Hours	less than 10 hours	**F**	74	9	83	2.361	2	0.307 N.S
		%	89.2%	10.8%	100.0%			
	10 - 12 Hours	**F**	52	2	54			
		%	96.3%	3.7%	100.0%			
	more than 12 hours	**F**	1	0	1			
		%	100.0%	0.0%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
	No	**F**	124	11	135	.266	1	**0.001**

Family history of the disease		**%**	91.9%	8.1%	100.0%			**H.S**
	Yes	**F**	3	0	3			
		%	100.0%	0.0%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			

This table show highly significant association between mother's experiences of healthy child and family history at p-value (0.001) which are less than 0.01. In other side the results indicate that significant association between mother's experience of healthy child and Weight of the child at birth at p- value (0.029) which are less than 0.05. While the results indicate that non-significant association between mother's experience of healthy child and remining demographical data of healthy children.

Table (4.23): Relationship between mother's experience of healthy child and mother's demographical characteristic.

Demographical Characteristic	Value		Good Experience	Poor Experience	Total	Chi-Square Tests	d.f	P.value ASS
Mother age group	**20-29**	**F**	54	5	59	.640	2	0.726
		%	91.5%	8.5%	100.0%			
	30-39	**F**	66	6	72			
		%	91.7%	8.3%	100.0%			
	40-49	**F**	7	0	7			
		%	100.0%	0.0%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
Marital status	**Married**	**F**	118	8	126	6.332	3	**.006 H. S**
		%	93.7%	6.3%	100.0%			
	Widow	**F**	2	1	3			
		%	66.7%	33.3%	100.0%			
	Separate	**F**	5	1	6			
		%	83.3%	16.7%	100.0%			
	Divorced	**F**	2	1	3			
		%	66.7%	33.3%	100.0%			

	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
Educational Status	**Able to Read and write**	**F**	10	2	12	5.605	5	0.347
		%	83.3%	16.7%	100.0%			
	Elementary graduate	**F**	16	0	16			
		%	100.0%	0.0%	100.0%			
	Intermediate graduate	**F**	13	3	16			
		%	81.3%	18.8%	100.0%			
	Undergraduate graduate	**F**	16	1	17			
		%	94.1%	5.9%	100.0%			
	Diploma	**F**	2	0	2			
		%	100.0%	0.0%	100.0%			
	Bachelor's degree or more	**F**	70	5	75			
		%	93.3%	6.7%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
Mother's employment	**Employee**	**F**	48	4	52	.009	1	**0.035 S**
		%	92.3%	7.7%	100.0%			
	Housewife	**F**	79	7	86			
		%	91.9%	8.1%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			
Use of medicines as contraceptives	**No**	**F**	80	6	86	.308	1	0.579
		%	93.0%	7.0%	100.0%			
	Yes	**F**	47	5	52			
		%	90.4%	9.6%	100.0%			
	Total	**F**	127	11	138			
		%	92.0%	8.0%	100.0%			

The above table show highly significant association between mother's experiences of healthy child and their marital status at p-value (0.001) which are less than 0.01. In other side the results indicate that significant association with mother's employment at p- value (0.035) which are less than 0.05. While the results indicate non-significant association between mother's experiences of healthy child and their remining demographical data.

Table (4.24): Relationship between mother's experience of autistic spectrum disorder child and child demographical characteristic.

Demographical Characteristic	Value		Good Experience	Poor Experience	Total	Chi-Square Tests	d.f	P.value ASS
Child age \ year	3	F	7	9	16	18.632	3	0.001 H. S
		%	43.8%	56.3%	100.0%			
	4	F	4	31	35			
		%	11.4%	88.6%	100.0%			
	5	F	3	27	30			
		%	10.0%	90.0%	100.0%			
	6	F	2	50	52			
		%	3.8%	96.2%	100.0%			
	Total	F	16	117	133			
		%	12.0%	88.0%	100.0%			
Gender	Male	F	10	84	94	.587	1	0.444
		%	10.6%	89.4%	100.0%			
	Female	F	6	33	39			
		%	15.4%	84.6%	100.0%			
	Total	F	16	117	133			
		%	12.0%	88.0%	100.0%			
Type of delivery for Child	Normal vaginal delivery	F	8	51	59	.580	2	0.748
		%	13.6%	86.4%	100.0%			
	Cesarean section	F	8	63	71			
		%	11.3%	88.7%	100.0%			
	Others	F	0	3	3			
		%	0.0%	100.0%	100.0%			
	Total	F	16	117	133			
		%	12.0%	88.0%	100.0%			
Weight of the child at birth	Low birth weight	F	9	48	57	1.332	1	.248
		%	15.8%	84.2%	100.0%			
	Normal birth Weight	F	7	69	76			
		%	9.2%	90.8%	100.0%			
	High birth weight	-	--	--	--			
	Total		16	117	133			

			12.0%	88.0%	100.0%			
The sequence of the child in the family	**1**	**F**	6	48	54	4.205	3	0.756
		%	11.1%	88.9%	100.0%			
	2	**F**	7	30	37			
		%	18.9%	81.1%	100.0%			
	3	**F**	1	22	23			
		%	4.5%	95.5 %	100.0%			
	More than 3	**F**	2	17	19			
		%	16.7%	83.3%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
The child's age at diagnosis	**3**	**F**	15	80	95	5.885	4	.436
		%	16.7%	83.3%	100.0%			
	4	**F**	1	20	21			
		%	4.8%	95.2%	100.0%			
	5	**F**	0	16	16			
		%	0.0%	100.0%	100.0%			
	6	**F**	0	1	1			
		%	0.0%	100.0%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
Type of Child Feeding	**Breast feeding**	**F**	4	40	44	3.558	2	.169
		%	9.1%	90.9%	100.0%			
	Artificial	**F**	9	38	47			
		%	19.1%	80.9%	100.0%			
	Mixed Breast feeding	**F**	3	39	42			
		%	7.1%	92.9%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
Sleep Hours	less than 10 hours	**F**	12	87	99	1.371	2	**0.001 H. S**
		%	12.1%	87.9%	100.0%			
	10 - 12 Hours	**F**	4	22	26			
		%	15.4%	84.6%	100.0%			
	more than 12 hours	**F**	0	8	8			
		%	0.0%	100.0%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
Family history of the disease	**No**	**F**	14	89	103	1.053	1	.305
		%	13.6%	86.4%	100.0%			
	Yes	**F**	2	28	30			
		%	6.7%	93.3%	100.0%			

	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			

The results in this table show highly significant association between mother's experience of autistic spectrum disorder child and child age and sleeping hours at p-value (0.001) which are less than 0.01. Also, the results in this table indicate that non-significant association between mother's experience of and remining demographical data.

Table (4.25): Relationship between mother's experience of ASD child and mother demographical characteristic.

Demographical Characteristic	Value		Good Experience	Poor Experience	Total	Chi-Square Tests	d.f	P.value ASS
Mother age group	**20-29**	**F**	6	36	42	.476	2	.924
		%	14.3%	85.7%	100.0%			
	30-39	**F**	8	61	69			
		%	11.6%	88.4%	100.0%			
	40-49	**F**	2	20	21			
		%	9.5%	90.5%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
Marital status	**Married**	**F**	16	108	124	1.320	3	.724
		%	12.9%	87.1%	100.0%			
	Widow	**F**	0	3	3			
		%	0.0%	100.0%	100.0%			
	Separate	**F**	0	2	2			
		%	0.0%	100.0%	100.0%			
	Divorced	**F**	0	4	4			
		%	0.0%	100.0%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
Educational Status	**Able to Read and write**	**F**	0	7	7	3.125	5	.681
		%	0.0%	100.0%	100.0%			
	Elementary graduate	**F**	0	9	9			
		%	0.0%	100.0%	100.0%			
	Intermediate graduate	**F**	2	18	20			
		%	10.0%	90.0%	100.0%			

	Undergraduate graduate	**F**	4	20	24			
		%	16.7%	83.3%	100.0%			
	Diploma	**F**	10	62	72			
		%	13.9%	86.1%	100.0%			
	Bachelor's degree or more	**F**	0	1	1			
		%	0.0%	100.0%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
Mother's employment	**Employee**	**F**	6	45	51	.148	2	.929
		%	11.8%	88.2%	100.0%			
	Housewife	**F**	10	72	81			
		%	12.3%	87.7%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			
Use of medicines as contraceptives	**No**	**F**	7	91	98	8.405	1	**0.004 H. S**
		%	7.1%	92.9%	100.0%			
	Yes	**F**	9	26	35			
		%	25.7%	74.3%	100.0%			
	Total	**F**	16	117	133			
		%	12.0%	88.0%	100.0%			

The results in table (4.25) show highly significant association between mother's experience of autistic spectrum disorder child and Use of medicines as contraceptives at p-value (0.004) which are less than 0.01. Also, the results in this table indicate that non-significant association between mother's experience of and remining demographical data.

Chapter Five

Discussion

Chapter Five

Discussions of the results

This chapter presents the discussion and interpretation of the study findings, with supportive evidence provided as being available in the articles which dealt with the study.

5.1 Distribution of demographic characteristics of the study sample.

The results in table (1) shows that less than two thirds of healthy children and more than two third of autistic spectrum disorder children were male gender. A study applied by *Mazursky-Horowitz* at 2016 titled as Executive Functioning and Parenting in Mothers of Children with and without ADHD, which found that most of children (61.9 %) were male gender. The researcher suggests the reason for these results that the care of boys is often different from the care of girls, especially in Iraq the place of collected sample where customs and traditions are imposed on the necessity of rough care with male children. "Male gender might be a determinant for autism, the risk of disease is 4 times higher susceptible in males than female. girls were more likely to be unidentified by some diagnostic instruments for ASD, and thus, the lower rates of ASD diagnosis compared to boys".

In terms of delivery method, less than two third of healthy children were normal vaginal deliveries, while less than two third of autistic spectrum disorder children were cesarean section deliveries. These results supported by study titled as Determinant Factors of Autism and Status of Nutritional for Pre-school Children, which founded that most of healthy children (72.5%) were normal vaginal delivery, will children with autistic spectrum disorder (55.8%) were cesarean section delivery (*Alkhalidy et al., 2021).* The findings of earlier research are supported by the findings of the present study. the risk of cesarean delivery and the accompanying anesthesia and the first

meeting period with the infant and its relationship to treatment in the neonatal care unit with an increase in the risk of ASD.

Table (1) also show that less than half of healthy children were breastfeeding, while less than half of the autistic spectrum disorder children recorded artificial feeding. This results not supported by study applied by *Al-Farsi et al., 2012* at Oman which titled as Effect of suboptimal breast-feeding on occurrence of autism, which funded that most of children in study group (53%) and control group (63.7%) with normal breastfeeding. From the researcher's point of view the skin contact between mother and her baby through breastfeeding would enhance the trust of the infant and give him a feeling of safety and therefore it will be reflected in the affirmative towards the formation of the child's personality

5.2 Mother's demographic characteristics of the study sample.

The demographic data in table (2) show that more than half of the mothers in both groups were between the ages of (30-39) years old, with more than half were a bachelor's degree or more in both groups. This result supported by study result applied in Egypt by *Omar et al., 2017* to find out challenges and adjustments of mothers having children with autism, which fund that most of mothers between age group 30 – 40 years old, whereas, *Lanier et al., 2018*, which found that majority of participants (63.77 %) were more than secondary school degree. According to the study, mothers with lesser levels of education are more likely to have children who are autistic, As the cultural level of mothers affects their awareness and motherhood, as well as their balanced relationship with their children.

The possibility of more genetic mutations in the gametes of older mothers is one of the theories that supports the association between mothers' age and an increased risk for autism spectrum disorders (ASD). Another

theory proposes that older mothers experience a less favorable environment in utero, leading to an increased risk of obstetrical complications such as prematurity, cerebral hypoxia and low birth weight, (Hadjkacem et al.,2016)

5.3-1 Mothers risk factor during pregnancy.

According to mother's risk factor during pregnancy, the table (3) show that one third of mother's the healthy children group were obesity, while one quarter mothers of autistic spectrum disorder children group were hypertension. This result parallel with a study titled as Prenatal, perinatal, and neonatal risk factors of autism spectrum disorder applied in united states by *Hisle-Gorman et al., 2018* which founded that the most of the mothers in control group of healthy children (12.6 %) were suffering from obesity, while the ASD mothers with hypertension (16.6 %).

5.3-2 Child risk factor during childbirth.

According to child risk factor during childbirth, table (4) show one quarter of healthy children and one third of autistic spectrum disorder were with fetal distress. A study applied by Hadjkacem et al., 2016; concerning gestational and neonatal factors associated with the disorder, who founded that most of the children (26 %) suffering from fetal distress; current results.

Neonatal mortality, prematurity, and intrauterine growth retardation, indicative of fetal distress are only a few examples of these disorders' broad relationships to fetal loss and poor baby outcomes. Fetal distress includes many symptoms, including fetal hypoxia, which has been linked to spontaneous miscarriage, placental abruption, threatening preterm birth, emergency cesarean sections, forceps delivery, and various degrees of brain impairment. The hippocampus, basal ganglia, and lateral ventricles are among the brain areas that are susceptible to injury from oxygen deprivation, which is why ASD was connected to fetal distress. When compared to

controls, some neuroimaging studies on patients with ASD showed abnormalities in these areas (Figueras, F., & Gratacós, E.2014)

5.3-3 Child risk factor during early childhood.

A study applied by Oewen et al., concerning the association between eating pattern type of food among autistic children from parents' perceptions; which funded that (80%) of children were eat sweet food between meals. This result parallel with the existing study results which showed in table (5) that explain one third of healthy children and one quarter of autistic spectrum disorder were the child's nutritional routine includes a lot of sugars and artificial sweeteners. According to the current research, children with ASD consumed little sources of minerals and vitamins, including vegetables, fish, and eggs. According to a previous research, children with ASD who ate less vegetables, fruits, poultry, and meats also consumed fewer vitamins and minerals.

5.4 Comparison between groups (mothers of healthy child and autistic spectrum disorder) related to mother's experiences toward cognitive achievement.

Table (10) shows the comparison between mother's experience related to their children of both group (healthy and ASD), mean score shows highly significant differences between the responses (P. value = 0.001). This result supported by study applied titled as Coping by redefinition: Cognitive appraisals in mothers of children with and without autism by *Tunali & Power in 2012*; which found significant association at p-value 0.01. "For mothers of children with autism, overall life satisfaction was correlated with leisure activities with the family (nuclear and extended), how well the mother understood her child's behavior, the importance of being a successful mother, and the belief that mothers should stay home to be with their children instead of pursuing careers. This was not the case for mothers of children

without autism. Only one correlate (i.e., how well the mother understood her child's behavior) was significant".

"By redefining what constitutes the fulfillment of basic human needs, mothers of children with autism can reduce any dissonance that might result from possible threats to these needs".

"An alternative explanation for these findings is that redefinition did not occur, but that the differences between mothers of children with and without autism reflect actual differences in the nature of the mothers' experiences".

5.5 Comparison between groups (mothers of healthy child and autistic spectrum disorder) related to Mothers experience about Social and Motor Achievement.

Table (14) shows the comparison between mother's experiences related to their children of both group (healthy and ASD) the recorder mean score shows highly significant differences between the responses (P. value = 0.001). this result parallel with study applied by *Memari et al., 2015* which found highly significant association at p – value 0.001. The mothers of young children with ASD reported impaired family functioning in several ways.

"Mothers spoke of how difficult it is to do normal or spontaneous family activities, because family life with a child with ASD has to be very structured and planned. A very frequently mentioned topic was the job and career adjustments mothers made to care for their child. Furthermore, mothers reported that there was little time left for personal activities or outings. In many of the interview's mothers complained about the lack of understanding of ASD from the environment. Some families even were isolated from their relatives because of denial or disbelief about their child's diagnosis. Sometimes mothers also reported marital strain because of

conflicts about their child's upbringing. In line with the evidence of parents' strengths and resilience in coping with the diagnosis of ASD, the mothers also have shown to do 'all they can' for their child with ASD. In spite of this, many of mothers' questions and concerns remained unanswered. In fact, a very frequent theme in mother's responses was their concern about the impact of their child with ASD on their other children".

"Previous sibling-studies also have suggested that a non-disabled sibling may encounter several negative consequences of having a disabled brother or sister, such as less parental attention, less normal family outings, embarrassment because of siblings' deviant behavior, limited companionship with the sibling, etc".

5.6 Comparison between groups (mothers of healthy child and autistic spectrum disorder) related to Mothers experiences about emotional Achievement.

The comparison in table (18); between mother's experiences related to their children of both group (healthy and ASD) the recorder mean score shows highly significant differences between the responses (P. value = 0.001). this result not parallel with study results titled as Psychological distress and positive gain in mothers of children with autism, with or without other children with neurodevelopmental disorders. By *Stanford et al., 2022.* Which found that no statistically significant group differences emerged overall psychological distress at p-value 0.15.

The researcher noticed through interviewing the sample that the mothers of children with autism have little or no emotional attachment with their children, and this is due to several social and psychological reasons, because the burden is great on the mother in terms of caring for him and bearing his emotions and nervousness, and therefore when the child reaches

the emotional need, he does not find it with the mother because it is Often, her strength has been depleted and she is unable to meet his emotional needs, unlike the mothers of healthy children, as they meet the emotional needs of the child, perhaps more than the rest of the other needs, due to their attachment to each other.

5.7 Comparison between mothers' experiences of healthy child and Autistics Spectrum Disorders

The finding in table (20) shows the comparison between mother's experience related to their children of both group (healthy and ASD) the recorder mean score shows highly significant differences between the responses toward cognitive, social and motor and emotional Achievements at (P. value = 0.001) which is less than 001. This result supported by a study titled as non-autistic and autistic women's experience of motherhood: A comparative study, carried out by *Pohl et al., 2020* in United Kingdom which found that high significant association between experience of autistic and non-autistic children mothers at P-value 0.008. It is probable that fear of other people's judgment is connected to interaction issues since most moms found speaking to experts to be so anxiety-inducing that they either couldn't think properly or had communication difficulties. Mothers may sometimes be dissuaded from asking for the precise assistance they want due to perceived stigma and worry about being seen as a terrible parent. The difficulties of mothering may become too much to bear, resulting, for instance, in feelings of loneliness and emotional exhaustion. These difficulties may be made worse by a lack of understanding and acceptance, as well as specialized support services, if mothers are less likely to turn to other parents or professionals for guidance and emotional support.

Therefore, it's critical to make sure that professionals have a deeper understanding of the difficulties of being a mother of an autistic child. The

stigma associated with autism will be lessened by increasing experts' knowledge and awareness, which may be help keeps moms from sharing their children's diagnosis. Additionally, it will make sure mothers can get the assistance they need to successfully speak up for their kids.

5.8 Association between mother's experiences of healthy child and child demographical characteristic.

The results in table (22) show highly significant link between mother's experiences for healthy child and family history at p-value (0.001) which are less than 0.01. In other side the results indicate that significant link between mother's experience of healthy child and weight of the child at birth at p-value (0.029) which are less than 0.05. this results not parallel with study results applied by *Alkhalidy et al., 2021,* which founded not significant association at p-value 0.184

5.9 Association between mother's experience of healthy child and mother’s demographical characteristic.

The table (23) show highly significant link between mother's experiences of healthy child and their marital position at p-value (0.001) which are less than 0.01. this result parallel with study results applied by *Pohl et al., 2020* which found that Signiant association at p-value 0.033, The researcher believes that in all societies, family problems occur, parental separation or abandonment, which leads to neglect and poor culture in raising children with the correct educational methods, especially that children in the current years and their culture with technological sites and their discover to the modern world make the child in comparison with himself, which generates a sense of mistrust, Shame, guilty of the parents' actions, inferiority, and denial of self, and other that make the child isolated in his own world.

In other side the results in table (23) indicate that significant association with mother's employment at p- value (0.035) which are less than 0.05. this result parallel with study applied by *Alkhalidy et al., 2021* which founded significant association between mothers' stressors and mothers' employments at p-value 0.042.

5.10 Relationship between mother's experience of autistic spectrum disorder child and child demographical characteristic.

The results in table (24) show highly significant association between mother's experience of autistic spectrum disorder child and child age and sleeping hours at p-value (0.001) which are less than 0.01. This result not parallel with study applied by *Mazursky-Horowitz, 2016* which founded not significant association between Correlations Between Parenting Behavior and child age group at p-value 0.09. In other side a study applied by *Wong et al., 2016*, which found high significant association at p-value 0.001

"Some ASD-related symptoms observed such as sleep disturbances and mood swings agrees with the literature. These results are consistent with previous research that indicates more anxiety, depression, and sleep abnormalities among ASD children".

5.11 Relationship between mother's experience of ASD child and mother demographical characteristic.

The results in table (25) show highly significant association between mother's experience of autistic spectrum disorder child and Use of medicines as contraceptives at p-value (0.004) which are less than 0.01.

"Previous studies showed that prevalence increase of oral contraceptive use in the past 60 years coincides with the recent dramatic rise in ASD prevalence, the correlation suggest a risk factor for ASD the suppression of ovulation produced by estrogen and progesterone is an

indisputable abnormality. It is logical to consider the outcome of the ovum that would have been normally released from the ovary during ovulation. When exposed to the hormonal compounds in the oral contraceptives the oocyte dies, if it survives it altered in any way". (Strifert, K. 2014)

"To date there is no comprehensive research into the potential neurodevelopmental effects of oral contraceptive use on progeny. Indeed, the issue has been only sparsely considered in the biomedical literature. The compounds used in oral contraceptives may modify the condition of the oocyte and give rise to the risk factor that explains the recent increase in the prevalence of ASD's".

Chapter Six

Conclusions
&
Recommendations

Chapter Six

Conclusions and Recommendations

This chapter presents the conclusion have drawn from the results of the study and its interpretation, as well as the recommendations listed below.

6.1. Conclusions

According to the interpretation of the results of this study, it concluded
as follows:

1- The total sample was (271) children distributed as (138) of healthy child and (133) of Autistic Spectrum Disorder (ASD) child. Related to their ages, that most healthy children (64) at 5 years old, while (52) of autistic spectrum disorder children at 6 years old. Related to gender, illustrate that most of the study sample in both groups (74), (94) were male gender. In terms of delivery method, most healthy children (72) had normal vaginal deliveries, while (71) of autistic spectrum disorder children had cesarean section deliveries. In addition, (63) healthy children were breastfed, while most of the autistic spectrum disorder children recorded artificial feeding at (47).

2- The overall assessment for mothers' experience of healthy children were good, while mothers' experiences of autistic spectrum disorder children were poor related to mothers' experiences about cognitive, emotional, social, and motor achievement.

3- The comparison between mother's experiences related to their children of both group (healthy and ASD) shows highly significant differences between the responses toward cognitive, social and motor and emotional Achievements, while non-significant relationship between mothers of healthy and autistic spectrum disorder children toward their experiences.

4- The results show very significant link between mother's experiences for healthy child and family history, and Significant link between mother's experience of healthy child and weight of the child at birth.

5- There is highly significant link between mother's experiences for healthy child and their marital position. On other side the results indicate that significant association with mother's employment.

6- The results show highly significant link between mother's experience for autistic spectrum disorder child and child age and sleeping hours. Furthermore, highly significant link between mother's experience for autistic spectrum disorder child and Use of medicines as contraceptives.

6.2 Recommendations

We need to identify Iraqi society with the realities of ASD. Therefore, our study recommended the following:

1- One of the priorities of the existing study must be focused on new mothers dealing with her child's specifically early childhood age-groups.
2- Development the centers that specialized in ASD and the provision of modern equipment used in for their therapy.
3- The results of the study point toward the sign in need for educating and training mothers in early detection and management of children with ASD as a phase of children affected under growing universally.
4- The need for further research on the risk factors and causes of ASD.
5- All staff who works in centers must be specialist to give sufficient time to mothers and teach them how to proper physically, socially, emotionally, nutrition, learning, and other daily care life for their children.
6- Providing educational programs on ASD for health workers in schools, kindergartens, radio and television programs and social networking programs.
7- Assessing the level of burden and psychological impact of disability on mothers and link them with organizations that care about them and support them.

References

References

- القران الكريم سورة الرعد الآية (28)
- Acevedo, A. (2018). A personalistic appraisal of Maslow's needs theory of motivation: From "humanistic" psychology to integral humanism. *Journal of Business Ethics*, *148*, 741-763.
- Ahmed, E. S., and Al-Halabi, N. F. (2015). Methods of parental treatment and its impact on the quality of life for children. Journal of Science and Arts, Egypt, Volume 27, Number 2, pp. 41-6.
- Al-Farsi, Y. M., Al-Sharbati, M. M., Waly, M. I., Al-Farsi, O. A., Al-Shafaee, M. A., Al-Khaduri, M. M., ... & Deth, R. C. (2012). Effect of suboptimal breast-feeding on occurrence of autism: A case–control study. Nutrition, 28(7-8), e27-e32.
- Alharbi, K., Alharbi, A., Thunayyan, F., Alsuhaibani, K., Alsalameh, N., Alhomaid, M., … Hamid, P. (2019). School's Teachers Knowledge About Autism in AlBadayacity, Al-Qassim Region, Kingdom of Saudi Arabia. *Materia Socio Medica*, 31(1), 4–9. https://doi.org/10.5455/msm.2019.31.4-9
- Alkhalidy, H., Abushaikha, A., Alnaser, K., Obeidat, M. D., & Al-Shami, I. (2021). Nutritional status of pre-school children and determinant factors of autism: a case-control study. *Frontiers in nutrition*, *8*, 627011.
- Al-Mosawi, A. J. (2019). Heller syndrome in two Iraqi children. *Clinical Research and Trials*, *5*, 1-3.
- Alnuaamy. (2016). Autism kidnapped Iraqi children from their families. Al-Araby Al-Jaded. Retrieved from https://www.alaraby.co.uk/society/2016/4/28

- Alshemary. (2019). Autism in Iraq. Al-Nabaa News. Retrieved from https://n.annabaa.org/news39869
- American psychological Association (2013). Diagnostic and Statistical Manual of Mental Disorders, fifth edition, vol .5. Washington: APA
- Barkley, R. A. (2013). Defiant children: A clinician's manual for assessment and parent training. Guilford press.
- Baron-Cohen, S. (2009). Autism: the empathizing–systemizing (E-S) theory. Annals of the New York Academy of Sciences, 1156(1), 68-80.
- Barrett, J., & Fleming, A. S. (2011). Annual research review: All mothers are not created equal: Neural and psychobiological perspectives on mothering and the importance of individual differences. Journal of Child Psychology and Psychiatry, 52(4), 368-397.
- Betancourt, T. S., Newnham, E. A., Layne, C. M., Kim, S., Steinberg, A. M., Ellis, H., & Birman, D. (2012). Trauma history and psychopathology in war-affected refugee children referred for trauma-related mental health services in the United States. *Journal of traumatic stress*, *25*(6), 682-690.
- Bijou, S. W., & Redd, W. H. (2015). Behavior Therapy for Children. (Sidney W. Bijou and William H. Redd, Ed.) (5th ed.). USA: International Psychotherapy Institute.
- Borghi, E., & Vignoli, A. (2019). Rett syndrome and other neurodevelopmental disorders share common changes in gut microbial community: A descriptive review. *International Journal of Molecular Sciences*, *20*(17), 4160.
- Borzekowski, D. L., & Henry, H. K. (2011). The impact of Jalan Sesama on the educational and healthy development of Indonesian

preschool children: An experimental study. *International Journal of Behavioral Development*, *35*(2), 169-179.

- Boyce, W. T. (2014). The lifelong effects of early childhood adversity and toxic stress. *Pediatric dentistry*, *36*(2), 102-108.
- Brereton, A. Checklist for autism in Toddlers, Monash University 1–3 (2011). Retrieved from www.med.monash.edu.au/spppm/research/devpsych/actnow
- Brugha, T. S., McManus, S., Bankart, J., Scott, F., Purdon, S., Smith, J., ... & Meltzer, H. (2011). Epidemiology of autism spectrum disorders in adults in the community in England. *Archives of general psychiatry*, *68*(5), 459-465. Brugha, T. S., McManus, S., Bankart, J., Scott, F., Purdon, S., Smith, J., ... & Meltzer, H. (2011). Epidemiology of autism spectrum disorders in adults in the community in England. *Archives of general psychiatry*, *68*(5), 459-465.
- Catalano, D., Holloway, L., & Mpofu, E. (2018). Mental health interventions for parent carers of children with autistic spectrum disorder: Practice guidelines from a critical interpretive synthesis (CIS) systematic review. *International journal of environmental research and public health*, *15*(2), 341.
- Center for Disease Control and Prevention, (2012). Identified prevalence of autism spectrum disorders ADDM network 200-2008.
- Centers for Disease Control and Prevention. (2010). Autism and Developmental Disabilities Monitoring Network. (2007). *Prevalence of the autism spectrum disorders*.
- Centers for Disease Control and Prevention. (2014). Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years— Autism and Developmental Disabilities Monitoring Network, 11 sites, United States. Morbidity and Mortality Weekly Report, 63, 1-21.)

- Chandran, H., Jayanthi, K., Prabavathy, S., Renuka, K., & Bhargavan, R. (2019). Effectiveness of video assisted teaching on knowledge, attitudes and practice among primary caregivers of children with Autism Spectrum Disorder. *Advances in Autism*, 231–242. https://doi.org/10.1108/AIA-10-2018-0039
- Charman, T. (2014). Early identification and intervention in autism spectrum disorders: Some progress but not as much as we hoped. International Journal of Speech-Language Pathology, 16(1), 15-18.
- Chaste, P., & Leboyer, M. (2022). Autism risk factors: genes, environment, and gene-environment interactions. *Dialogues in clinical neuroscience*.
- Chiang, H. M. (2014). A parent education program for parents of Chinese American children with autism spectrum disorders (ASDs) a pilot study. *Focus on Autism and Other Developmental Disabilities*, *29*(2), 88-94.
- Chiang, H. M., & Wineman, I. (2014). Factors associated with quality of life in individuals with autism spectrum disorders: A review of literature. *Research in autism spectrum disorders*, *8*(8), 974-986.
- Chiarotti, F., & Venerosi, A. (2020). Epidemiology of autism spectrum disorders: a review of worldwide prevalence estimates since 2014. *Brain sciences*, *10*(5), 274.
- Choi, B. (2019). Early Behavioral and Environmental Predictors of Language Skills in Infants at High and Low Risk for Autism Spectrum Disorder (Doctoral dissertation, Harvard University).
- Chronis-Tuscano, A., Lewis-Morrarty, E., Woods, K. E., O'Brien, K. A., Mazursky-Horowitz, H., & Thomas, S. R. (2016). Parent–child interaction therapy with emotion coaching for preschoolers with

attention-deficit/hyperactivity disorder. *Cognitive and behavioral practice*, *23*(1), 62-78.

- Coccia M., and Benati I. (2018). Comparative Studies. In: Farazmand A. (eds) Global Encyclopedia of Public Administration, Public Policy, and Governance. Springer, Cham.
- Dardas, L. A., & Ahmad, M. M. (2015). For fathers raising children with autism, do coping strategies mediate or moderate the relationship between parenting stress and quality of life?. *Research in developmental disabilities*, *36*, 620-629.
- Di Vara, S., Guerrera, S., Valeri, G., & Vicari, S. (2022). Later onset of Childhood Disintegrative Disorder (CDD): a case report. *Neurocase*, *28*(4), 369-374.
- Drusch, S. J. (2015). The Early Identification of Autism Spectrum Disorder in Preschool Settings. Retrieved from Sophia, the St. Catherine University repository website: https://sophia.stkate.edu/msw_papers/437.
- Duschinsky, R. (2018). Disorganization, fear and attachment: Working towards clarification. *Infant Mental Health Journal*, *39*(1), 17-29.
- Elder, J. H., Donaldson, S. O., Kairalla, J., Valcante, G., Bendixen, R., Ferdig, R., ... & Serrano, M. (2011). In-home training for fathers of children with autism: A follow up study and evaluation of four individual training components. Journal of Child and Family Studies, 20(3), 263-271.
- Ellis, A. A., Nixon, R. D., & Williamson, P. (2009). The effects of social support and negative appraisals on acute stress symptoms and depression in children and adolescents. *British Journal of Clinical Psychology*, *48*(4), 347-361.

- Eltyeb, E. E. (2017). Autistic Spectrum Disorders: The Challenge of Early Detection in the Arab Region. *Journal of Medical Science and Clinical Research*, 5(9), 27644–27648. https://doi.org/10.18535/jmscr/v5i9.46
- Eubanks, J. (2019). Rett's syndrome from a Medical Research Perspective. Vienna.
- Farrell, T., Rappaport, L. and Sell, N., T. B. (2011). Vitamin and Exercise Based Therapies.
- Feinberg, E., Augustyn, M., Fitzgerald, E., Sandler, J., Suarez, Z. F. C., Chen, N., ... & Silverstein, M. (2014). Improving maternal mental health after a child's diagnosis of autism spectrum disorder: results from a randomized clinical trial. *JAMA pediatrics*, *168*(1), 40-46.
- Figueras, F., & Gratacós, E. (2014). Update on the diagnosis and classification of fetal growth restriction and proposal of a stage-based management protocol. *Fetal diagnosis and therapy*, *36*(2), 86-98.
- Fitzgerald, M. (2016). Textbook of Autism Spectrum Disorders. Irish journal of psychological medicine (Vol. 28). Ireland. Food and Drug Administration. FDA approves the first drug to treat irritability associated with autism, Risperdal. October 6, 2006.
- Fox, S. E., Levitt, P., & Nelson III, C. A. (2010). How the timing and quality of early experiences influence the development of brain architecture. *Child development*, *81*(1), 28-40.
- Fuentes, J., Bakare, M., & Munir, K. (2014). Developmental disorders. In IACAPAP Textbook of Child and Adolescent Mental Health (2014 Editi). Ukraine: International Association for Child and Adolescent Psychiatry and Allied Professions.

- Gambrel, P. A., & Cianci, R. (2003). Maslow's hierarchy of needs: Does it apply in a collectivist culture. *Journal of Applied Management and Entrepreneurship*, *8*(2), 143.
- Gook, L. E., Haimour, A. I., Obaidat, Y. F., Helmy, F. F., Sylvester, O. A., Chinwendum, O. D., … Segall, M. J. (2013). Awareness of Autism in Primary School Teachers. Journal of Autism and Developmental Disorders, 5(1), S10–S40. https://doi.org/10.1017/CBO9781107415324.004.
- Gordillo, M. L., Chu, A., & Long, K. (2020). Mothers' adjustment to autism: exploring the roles of autism knowledge and culture. *Journal of Pediatric Psychology*, *45*(8), 877-886.
- Greydanus, D. E., & Toledo-Pereyra, L. H. (2012). Historical perspectives on autism: Its past record of discovery and its present state of solipsism, skepticism, and sorrowful suspicion. *Pediatric Clinics*, *59*(1), 1-11.
- Hadi, M. S., & Kassim, N. M. (2020). Kindergartens Teachers Early Detection Knowledge about Autism Spectrum Disorder in Babylon Province. *International Journal of Psychosocial Rehabilitation*, *24*(04).
- Hadjkacem, I., Ayadi, H., Turki, M., Yaich, S., Khemekhem, K., Walha, A., ... & Ghribi, F. (2016). Prenatal, perinatal and postnatal factors associated with autism spectrum disorder. *Jornal de pediatria*, *92*, 595-601.
- Hamadneh, S., Al-Bayyari, N., & M. Hamadneh, B. (2019). Nutritional and Dietary Interventions of Autistic Spectrum Disorders: A Short Review. *International Journal of Pediatrics*, 7(11), 10343–10348.

- Henninger, N. A., & Taylor, J. L. (2013). Outcomes in adults with autism spectrum disorders: A historical perspective. *Autism*, *17*(1), 103-116.
- Hinojosa, M. S., Hinojosa, R., Fernandez-Baca, D., Knapp, C., & Thompson, L. A. (2012). Parental strain, parental health, and community characteristics among children with attention deficit–hyperactivity disorder. *Academic Pediatrics*, *12*(6), 502-508.
- Hisle-Gorman, E., Susi, A., Stokes, T., Gorman, G., Erdie-Lalena, C., & Nylund, C. M. (2018). Prenatal, perinatal, and neonatal risk factors of autism spectrum disorder. Pediatric research, 84(2), 190-198.

  http://www.cdc.gov/NCBDDD/autism/data. ❖
- Johnson, C. P., Myers, S. M., Lipkin, P. H., Cartwright, J. D., Desch, L. W., Duby, J. C., … Yeargin-Allsopp, M. (2017). Identification and evaluation of children with autism spectrum disorders. American Academy Of Pediatrics, 120(5), 1183–1215
- Kazmerski, J. (2019). Nursing managements of autism spectrum disorders in the school aged child : Texas Children's Hospital Provider.
- Kim, H., & Suh, Y. (2016). Effect of Psychomotricity by ADHD Children on the Ego-Resilience and Social Relation Skill of Convergence. *Indian Journal of Science and Technology*, *9*(26), 1-5.
- Knopf, A. (2018). Autism rates increase slightly: CDC. *The Brown University Child and Adolescent Behavior Letter*, *34*(6), 4-5.
- Koegel, L. K., Koegel, R. L., Ashbaugh, K., & Bradshaw, J. (2014). The importance of early identification and intervention for children with or at risk for autism spectrum disorders. *International journal of speech-language pathology*, *16*(1), 50-56.
- Köse, S., Ocakoğlu, F. T., Ocakoglu, B. K., & Özbaran, B. (2017). The naturalistic follow-up of pervasive developmental disorders – not

otherwise specified cases. Psychiatry and Clinical Psychopharmacology, 27(3), 243

- Laffaye, C., Cavella, S., Drescher, K., & Rosen, C. (2008). Relationships among PTSD symptoms, social support, and support source in veterans with chronic PTSD. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *21*(4), 394-401.
- Landa, R. J., Gross, A. L., Stuart, E. A., & Faherty, A. (2013). Developmental trajectories in children with and without autism spectrum disorders: the first 3 years. Child development, 84(2), 429-442.
- Lang R, Machaliecek, W., Rispoli, M. & Regester A. (2009) Training parents to implement communication interventions for children with autism spectrum disorders (ASD): A systematic review. Evidence-based Communication Assessment and Intervention 3, 174–90.
- Lanier, P., Maguire-Jack, K., Lombardi, B., Frey, J., & Rose, R. A. (2018). Adverse childhood experiences and child health outcomes: Comparing cumulative risk and latent class approaches. *Maternal and child health journal*, *22*(3), 288-297.
- LeClerc, S., & Easley, D. (2015). Pharmacological therapies for autism spectrum disorder: A review. P and T, 40(6), 389– 397.
- Lee, C. Y. S., & Goldstein, S. E. (2016). Loneliness, stress, and social support in young adulthood: Does the source of support matter?. *Journal of youth and adolescence*, *45*, 568-580.
- Levy, F. (2007). Working memory, catecholamines and psychosis: illustrative case. Australian & New Zealand Journal of Psychiatry, 41(1), 74-77.

- Li, Y. J., Ou, J. J., Li, Y. M., & Xiang, D. X. (2017). Dietary supplement for core symptoms of autism spectrum disorder: Where are we now and where should we go? Frontiers in Psychiatry, 8, 155.
- Liu, L., Zhang, D., Rodzinka-Pasko, J. K., & Li, Y. M. (2016). Environmental risk factors for autism spectrum disorders. *Der Nervenarzt*, *87*(2), 55-61.
- Lonnie Zwaigenbaum, MD, A., L., M., Bauman, MD, B., Wendy L. Stone, PhD, c Nurit Yirmiya, PhD, D., Annette Estes, PhD, e Robin L. Hansen, MD, F., C., J., … ADepartment. (2019). Early Identification of Autism Spectrum Disorder : Recommendations for Practice and Research abstract. *Pediatrics*, 136(1), S10–S40. https://doi.org/10.1542/peds.2014-3667C
- Lord, C., Risi, S., Lambrecht, L., Cook, E. H., Leventhal, B. L., DiLavore, P. C., ... & Rutter, M. (2000). The Autism Diagnostic Observation Schedule—Generic: A standard measure of social and communication deficits associated with the spectrum of autism. *Journal of autism and developmental disorders*, *30*(3), 205-223.
- Love, J. R., Carr, J. E., Almason, S. M., & Petursdottir, A. I. (2009). Early and intensive behavioral intervention for autism: A survey of clinical practices. Research in Autism Spectrum Disorders, 3(2), 421-428.
- Luyster, R., Richler, J., Risi, S., Hsu, W. L., Dawson, G., Bernier, R., ... & Lord, C. (2005). Early regression in social communication in autism spectrum disorders: A CPEA study. *Developmental neuropsychology*, *27*(3), 311-336.

- Mary C. Townsend, P.B, (2015). Psychiatric Nursing (9th ed.). United States of America Last: F. A. Davis Company Copyright.
- Mary C. Townsend. (2014). Essentials of Psychiatric Mental Health Nursing (6th ed.). United States of America: F. A. Davis Company.
- Matson, J. L. (Ed.). (2016). *Handbook of assessment and diagnosis of autism spectrum disorder*. Springer.
- Mawere, M., Mubaya, T. R., Van Reisen, M., & Van Stam, G. (2016). Chapter Three Maslow's Theory of Human Motivation and its Deep Roots in Individualism: Interrogating Maslow's Applicability in Africa. *Theory, knowledge, development and politics: What role for the academy in the sustainability of Africa*, *55*.
- Maynard, D. W., & Turowetz, J. (2017). Doing diagnosis: Autism, interaction order, and the use of narrative in clinical talk. *Social Psychology Quarterly*, *80*(3), 254-275.
- Mazursky-Horowitz, H. M. (2016). Executive Functioning and Parenting in Mothers of Children with and without ADHD (Doctoral dissertation).
- McPheeters, M. L., Weitlauf, A., Vehorn, A., Taylor, C., Sathe, N. A., Krishnaswami, S., … Warren, Z. E. (2016). Screening for Autism Spectrum Disorder in Young Children: A Systematic Evidence Review for the U.S. Preventive Services Task Force. Evidence Synthesis No. 129. AHRQ Publication No. 13-05185-EF-1. Rockville, MD: *Agency for Healthcare Research and Quality*. Merriam-Webster (https://www.merriam-webster.com/)
- Meadan, H., Ostrosky, M. M., Zaghlawan, H. Y., & Yu, S. (2009). Promoting the social and communicative behavior of young children with autism spectrum disorders: A review of parent-implemented

intervention studies. *Topics in Early Childhood Special Education*, *29*(2), 90-104.

- Memari, A. H., Panahi, N., Ranjbar, E., Moshayedi, P., Shafiei, M., Kordi, R., & Ziaee, V. (2015). Children with autism spectrum disorder and patterns of participation in daily physical and play activities. *Neurology research international*, *2015*.
- Minjarez, M. B., Williams, S. E., Mercier, E. M., & Hardan, A. Y. (2011). Pivotal response group treatment program for parents of children with autism. Journal of autism and developmental disorders, 41(1), 92-101.
- Nguyen, N. N., Leytham, P., Schaefer Whitby, P., & Gelfer, J. I. (2015). Reading comprehension and autism in the primary general education classroom. *The Reading Teacher*, *69*(1), 71-76.
- Oerlemans, A. M., Burmanje, M. J., Franke, B., Buitelaar, J. K., Hartman, C. A., & Rommelse, N. N. (2016). Identifying unique versus shared pre-and perinatal risk factors for ASD and ADHD using a simplex-multiplex stratification. *Journal of abnormal child psychology*, *44*(5), 923-935.
- Omar, T. E., Ahmed, W. M., & Basiouny, N. S. (2017). Challenges and adjustments of mothers having children with autism. *Alexandria Journal of Pediatrics*, *30*(3), 120.
- Oosterling, I. J., Wensing, M., Swinkels, S. H., Van Der Gaag, R. J., Visser, J. C., Woudenberg, T., … Buitelaar, J. K. (2010). Advancing early detection of autism spectrum disorder by applying an integrated two-stage screening approach. Journal of Child Psychology and Psychiatry,51(3), 250–258.
- Patel, V., Araya, R., Chatterjee, S., Chisholm, D., Cohen, A., De Silva, M., ... & Van Ommeren, M. (2007). Treatment and prevention of

mental disorders in low-income and middle-income countries. *The lancet*, *370*(9591), 991-1005.

- Petrovska, S., Sivevska, D., & Cackov, O. (2013). Role of the Game in the Development of Preschool Child. *Procedia-Social and Behavioral Sciences*, *92*, 880-884.
- Pijl, M. K. J., Buitelaar, J. K., de Korte, M. W. P., Rommelse, N. N. J., & Oosterling, I. J. (2018). Sustainability of an early detection program for autism spectrum disorder over the course of 8 years. *Autism*, 22(8), 1018–1024.
- Pohl, A. L., Crockford, S. K., Blakemore, M., Allison, C., & Baron-Cohen, S. (2020). A comparative study of autistic and non-autistic women's experience of motherhood. Molecular Autism, 11(1), 1-12.
- Randall M, Egberts KJ, Samtani A, Scholten RJPM, Hooft L, Livingstone N, Sterling-Levis K, Woolfenden S, W. K. (2018). Diagnostic tests for autism spectrum disorder (ASD) in preschool children (Review). *Cochrane Database of Systematic Reviews*, (7), Art. No.: CD009044.
- Rayan, A., & Ahmad, M. (2016). Effectiveness of mindfulness-based interventions on quality of life and positive reappraisal coping among parents of children with autism spectrum disorder. *Research in developmental disabilities*, *55*, 185-196.
- Rellini, E., Tortolani, D., Trillo, S., Carbone, S., & Montecchi, F. (2014). Childhood Autism Rating Scale (CARS) and Autism Behavior Checklist (ABC) Correspondence and Conflicts. Journal of Autism and Developmental Disorders, 34(6).
- Ribeiro, S. H., Paula, C. S. De, Bordini, D., Mari, J. J., & Caetano, S. C. (2017). Barriers to early identification of

autism in Brazil. *Revista Brasileira de Psiquiatria,* 39, 352–354. https://doi.org/10.1590/1516-4446-2016-2141

- Ridderinkhof, A., de Bruin, E. I., Blom, R., & Bögels, S. M. (2018). Mindfulness-based program for children with autism spectrum disorder and their parents: Direct and long-term improvements. *Mindfulness*, *9*(3), 773-791.
- Rutherford, M., Baxter, J., Grayson, Z., Johnston, L., & O'Hare, A. (2020). Visual supports at home and in the community for individuals with autism spectrum disorders: A scoping review. *Autism*, *24*(2), 447-469.
- Sala, R., Amet, L., Blagojevic-Stokic, N., Shattock, P., & Whiteley, P. (2020). Bridging the gap between physical health and autism spectrum disorder. *Neuropsychiatric Disease and Treatment*, 1605-1618.
- Sales, B. D., & Folkman, S. E. (2000). *Ethics in research with human participants*. American Psychological Association.
- Saltzburg, S. (2009). Parents' experience of feeling socially supported as adolescents come out as lesbian and gay: A phenomenological study. *Journal of Family Social Work*, *12*(4), 340-358.
- Samadi, S. A., & McConkey, R. (2015). Screening for Autism in Iranian Preschoolers: Contrasting M-CHAT and a Scale Developed in Iran. *Journal of Autism and Developmental Disorders*. https://doi.org/10.1007/s10803-015-2454-1
- Saraswati, P., Rashmi, P., Sunith, P. S., & Vidya, M. (2018). A Review-A Sperger Syndrome. *Asian Journal of Nursing Education and Research*, *8*(4), 541-542.
- Sheila, I. videbeck, R. (2017). psychiatric mental health nursing. (H. Kogut & D. Reilly, Eds.) (7th ed.). china: wolters Kluwer

- Shonkoff, J. P. (2016). Capitalizing on advances in science to reduce the health consequences of early childhood adversity. *JAMA pediatrics*, *170*(10), 1003-1007.
- Siddiqui, J. A., Qureshi, S. F., & Shawosh, Y. B. A. (2019). Evolution of 'Dementia Infantilis to Childhood Disintegrative Disorder, or Autism Spectrum Disorder': A case report. *Journal of Indian Association for Child and Adolescent Mental Health-ISSN 0973-1342*, *15*(3), 68-75.
- Simonstein, F., & Mashiach-Eizenberg, M. (2016). Attitudess Toward Autism Spectrum Disorders Among Students of Allied Health Professions. *National Society Of Genetic Counselors*, 25, 1276–1285. https://doi.org/10.1007/s10897-016-9969-2
- Skoufou, A. (2019). Social Interaction of Preschool Children with Autism Spectrum Disorders (ASD) -Characteristics and Educational Approaches. *International Journal of Economics and Management Studies*, 6(6), 28–36.
- Stanford, C. E., Hastings, R. P., Riby, D. M., Archer, H. J., Page, S. E., & Cebula, K. (2022). Psychological distress and positive gain in mothers of children with autism, with or without other children with neurodevelopmental disorders. *International journal of developmental disabilities*, *68*(4), 479-484.
- Strifert, K. (2014). The link between oral contraceptive use and prevalence in autism spectrum disorder. Medical Hypotheses, 83(6), 718-725.
- Sturmey, P., & Filtzer, A. (2007). Autism spectrum disorders: Applied behavioral analysis, evidence, and practice. Austim. Bioinformatics, 141-150.

- Sun, X., Allison, C., Matthews, F. E., Sharp, S. J., Auyeung, B., Baron-Cohen, S., & Brayne, C. (2013). Prevalence of autism in mainland China, Hong Kong and Taiwan: A systematic review and meta-analysis. Molecular Autism, 4(1)
- Tager-Flusberg, H. (2005). What neurodevelopmental disorders can reveal about cognitive architecture. The Innate Mind: Structure and Content, 272-90.
- Techasaensiri, B., Chuthapisith, J., Thaowan, S., & Ruangdaraganon, N. (2011). Validity of a Thai version of the Bayley scales of infant and toddler development, (Bayley-III) language scale: a pilot study in 22 to 24 months old children. *Thai J Pediatr*, *50*, 133-43.
- Thabtah, F., & Peebles, D. (2019). Early Autism Screening: A Comprehensive Review. *International Journal of Environmental Research and Public Health*, 16(18).
- the North American Nursing Diagnosis Association -I, 2012 (p. 320, p. 275, p. 282)
- Thompson, R. A. (2014). Stress and child development. *The Future of Children*, 41-59.
- Thomson, K., Martin, G. L., Arnal, L., Fazzio, D., & Yu, C. T. (2009). Instructing individuals to deliver discrete-trials teaching to children with autism spectrum disorders: A review. Research in Autism Spectrum Disorders, 3(3), 590-606.
- Towle, P. O., & Patrick, P. A. (2016). Autism Spectrum Disorder Screening Instruments for Very Young Children : A Systematic Review. *Hindawi Publishing Corporation Autism Research and Treatment*, (4624829), 29. Retrieved from http://dx.doi.org/10.1155/2016/4624829

- Trivedi, A. J., & Mehta, A. (2019). Maslow's Hierarchy of Needs-Theory of Human Motivation. *International Journal of Research in all Subjects in Multi Languages*, *7*(6), 38-41.
- Trudeau, M. S., Madden, R. F., Parnell, J. A., Ben Gibbard, W., & Shearer, J. (2019). Dietary and supplement-based complementary and alternative medicine use in pediatric autism spectrum disorder. Nutrients, 11(8), 1–11.
- Tuchman, R., Cuccaro, M., & Alessandri, M. (2010). Autism and epilepsy: historical perspective. *Brain and Development*, *32*(9), 709-718.
- Tunali, B., & Power, T. G. (2012). Coping by redefinition: Cognitive appraisals in mothers of children with autism and children without autism. *Journal of autism and developmental disorders*, *32*, 25-34.
- Ünlü, E., Vuran, S., & Diken, I. H. (2018). Effectiveness of Discrete Trial Training Program for Parents of Children with Autism Spectrum Disorder. *International Journal of Progressive Education*, *14*(3), 12-31.
- Videbeck, S. L. (2010). Psychiatric-mental health nursing. Lippincott Williams & Wilkins.
- Volkmar, F. R., & McPartland, J. C. (2014). From Kanner to DSM-5: autism as an evolving diagnostic concept. *Annual review of clinical psychology*, *10*, 193-212.
- Wilczynski, S., & Pollack, E. (2009). Evidence-based practice and autism in the schools: A guide to providing appropriate interventions to students with autism spectrum disorders.
- Wong, C., Odom, S. L., Hume, K. A., Cox, A. W., Fettig, A., Kucharczyk, S., ... & Schultz, T. R. (2015). Evidence-based practices for children, youth, and young adults with autism spectrum disorder: A

comprehensive review. *Journal of autism and developmental disorders*, *45*(7), 1951-1966.

- World Health Organization 2019 (https://www.who.int/newsroom/fact-sheets/detail/autism-spectrum-disorders)
- Xia, R. R. (2011). Effectiveness of nutritional supplements for reducing symptoms in autism-spectrum disorder: a case report. *The Journal of Alternative and Complementary Medicine*, *17*(3), 271-274.
- Zablotsky, B., Bradshaw, C. P., & Stuart, E. A. (2013). The association between mental health, stress, and coping supports in mothers of children with autism spectrum disorders. *Journal of autism and developmental disorders*, *43*(6), 1380-1393.
- Zwaigenbaum, L., Bauman, M. L., Stone, W. L., Yirmiya, N., Estes, A., Hansen, R. L., ... & Wetherby, A. (2019). Early identification of autism spectrum disorder: Recommendations for practice and research. Pediatrics, 136(Supplement_1), S10-S40.

Appendices

University of Babylon
College of Nursing
Research Ethics Committee

جـامـعة بـابـل
كـلية التمريـض
لجنة اخلاقيات البحث العلمي

Issue No:

Date: / /2022

Approval Letter

To,

Zahraa Ali Kadhum Baiee

The Research Ethics committee at the **University of Babylon, College of Nursing** has reviewed and discussed your application to conduct the research study entitled **" Healthy Development and Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study"**

The Following documents have been reviewed and approved:

1. Research protocol
2. Research instrument/s
3. Participant informed consent

Committee Decision.

The committee approves the study to be conducted in the presented form. The Research Ethics committee expects to be informed about any changes occurring during the study, any revision in the protocol and participant informed consent.

Prof. Dr. Salma K. Jehad
Chair Committee
College of Nursing
Research Ethical Committee
/ /2022

جمهورية العـــراق
وزارة التـربيـــة

المديرية العامة للتربية في محافظة بابل
قسم الإعداد والتدريب شعبة التدريب
العدد ٤١/٣/٤١ /
التاريخ ٢٠ / ٧ / ٢٠٢٢

الى / ادارات رياض الاطفال (الحكومي والاهلي) في محافظة بابل

م / تسهيل مهمة

تحية طيبة ...

اشارة الى كتاب جامعة بابل / كلية التمريض المرقم ٢٤٠١ في ٢٠٢٢/٧/٧ نرجوا تسهيل مهمة طالبة الدكتوراه (زهراء علي كاظم عبد) لغرض اكمال متطلبات بحثها الموسوم (التطور الصحي واضطرابات طيف التوحد عند الاطفال المتعلقة بخبرات امهاتهم في مرحلة الطفولة المبكرة: دراسة مقارنة) وابداء تعاونكم معها عند زيارتها مدارسكم ... مع التقدير

عباس كاظم حامد
مدير قسم الاعداد والتدريب
٢٠٢٢/٧/ ٢٠

نسخة منة الى //
جامعة بابل / كلية التمريض / كتابكم اعلاه للتفضل بالاطلاع.. مع التقدير .
مكتب السيد المدير العام ..مع التقدير .
قسم التعليم العام والملاك / لنفس الغرض اعلاه ..مع التقدير.
قسم التخطيط التربوي / الاحصاء / لنفس الغرض اعلاه ..مع التقدير .
قسم الاشراف التربوي / لنفس الغرض اعلاه ..مع التقدير .
الطالبة (زهراء علي كاظم عبد) ..مع التقدير .
الاعداد والتدريب / شعبة البحوث / تسهيل المهمة مع الاوليات / الملف الدوار .

E.mail:babylon41training@gmail.com

Ministry of Higher Education and Scientific Research
وزارة التعليم العالي والبحث العلمي
University of Babylon
College of Nursing
جامعة بابل
كلية التمريض
وحدة الدراسات العليا

العدد : ٢٦١٦
التاريخ : ١٦ / ١٠ / ٢٠٢٢

Ref. No. :
Date: / /

الى / مؤسسة الزهور
م/ تسهيل مهمة

تحية طيبة :

يطيب لنا حسن التواصل معكم ويرجى تفضلكم بتسهيل مهمة طالبة الدكتوراه (زهراء علي كاظم عبد) لغرض جمع عينة دراسة الدكتوراه والخاصة بالبحث الموسوم :

(التطور الصحي واضطرابات طيف التوحد عند الاطفال المتعلقة بخبرات امهاتهم في مرحلة الطفولة المبكرة : دراسة مقارنة) .

(Healthy Development and Autistics Spectrum Disorders in Children related to their mother experience in early Childhood : A Comparative Study).

... مع الاحترام ...

كلية التمريض
المعاون العلمي

أ. د. نهاد محمد قاسم الدوري
معاون العميد للشؤون العلمية والدراسات العليا
١٦/ ١٠ /٢٠٢٢

المرافقات //
- بروتوكول .
- استبانة

صورة عنه الى //
- مكتب السيد العميد للتفضل بالاطلاع مع الاحترام .
- لجنة الدراسات العليا
- الصادرة .

E-mail:nursing@uobabylon.edu.iq
وطني 07711632208
المكتب 009647711632208
www.uobabylon.edu.iq

وزارة التعليم العالي والبحث العلمي
Ministry of Higher Education and Scientific Research
جمهورية العراق
جامعة بابل
University of Babylon
College of Nursing
كلية التمريض
لجنة الدراسات العليا

العدد : ٤٦٦٤
التاريخ : ٢٤ / ٧ / ٢٠٢٢

Ref. No. :
Date: / /

الى / العتبة الحسينية المقدسة
مركز التوحد في بابل
معهد الخنساء
مركز الرحمة التخصصي
معهد اوتزم بابل لذوي الاحتياجات الخاصة
م/ تسهيل مهمة

تحية طيبة :

يطيب لنا حسن التواصل معكم ويرجى تفضلكم بتسهيل مهمة طالبة الدكتوراه (زهراء علي كاظم عبد) لغرض جمع عينة دراسة الدكتوراه والخاصة بالبحث الموسوم :

(التطور الصحي واضطرابات طيف التوحد عند الاطفال المتعلقة بخبرات امهاتهم في مرحلة الطفولة المبكرة : دراسة مقارنة) .

(healthy development and autistics spectrum disorders in children related to their mothers experiences in early childhood : a comparative study).

... مع الاحترام ...

المرافقات //
- بروتوكول .
- استبانة

كتاب الرئيس
المعاون العلمي

ا.م . د. نهاد محمد قاسم الدوري
معاون العميد للشؤون العلمية والدراسات العليا
٢٠٢٢ /٧/ ٢٤

صورة عنه الى //
- مكتب السيد العميد للتفضل بالاطلاع مع الاحترام .
- لجنة الدراسات العليا
- الصادرة .

*بسمة ٧/٢٤

E-mail:nursing@uobabylon.edu.iq
STARS
وطني 07711632208
المكتب 009647711632208
www.uobabylon.edu.iq

Appendix E **Formal Permission**

Ministry of Higher Education and Scientific Research
وزارة التعليم العالي والبحث العلمي
جمهورية العراق
University of Babylon
College of Nursing
جامعة بابل
كلية التمريض
لجنة الدراسات العليا

العدد : ٥٤٣
Ref. No. :
التاريخ : ٢٨ / ٧ / ٢٠٢٢
Date: / /

الى / مركز الاخصائية سرى رشيد هارون لرعاية التوحد
معهد المزايا المنتج
م/ تسهيل مهمة

تحية طيبة :

يطيب لنا حسن التواصل معكم ويرجى تفضلكم بتسهيل مهمة طالبة الدكتوراه
(زهراء علي كاظم عبد) لغرض جمع عينة دراسة الدكتوراه والخاصة بالبحث الموسوم :

(التطور الصحي واضطرابات طيف التوحد عند الاطفال المتعلقة بخبرات امهاتهم في مرحلة الطفولة المبكرة : دراسة مقارنة) .

(healthy development and autistics spectrum disorders in children related to their mother experience in early childhood : a comparative study).

... مع الاحترام ...

المرافقات //
- بروتوكول .
- استبانة

المعاون العلمي

أ.م . د. نهاد محمد قاسم الدوري
معاون العميد للشؤون العلمية والدراسات العليا
٢٨ / ٧ / ٢٠٢٢

صورة عنه الى //
- مكتب السيد العميد للتفضل بالاطلاع مع الاحترام .
- لجنة الدراسات العليا
- الصادرة

بسمة ٢٨/ ٧

E-mail:nursing@uobabylon.edu.iq
STARS
وطني 07711632208
المكتب 009647711632208
www.uobabylon.edu.iq

وزارة التعليم العالي والبحث العلمي

كلية التمريض / جامعة بابل

عزيزتي الام

بين يديك استبانة لدراسة

التطور الصحي واضطرابات طيف التوحد عند الأطفال المتعلقة بخبرات أمهاتهم في مرحلة الطفولة المبكرة

Healthy Development and Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study

يروم الباحث الى دراسة (التطور الصحي واضطرابات طيف التوحد عند الأطفال المتعلقة بخبرات أمهاتهم في مرحلة الطفولة المبكرة) ، وبما أن مشاركتكم في هذه الدراسة ذات قيمة كبيرة، فالرجاء اختيار الإجابة التي تحدد ما تشعر به بالفعل، علما أنه لا توجد إجابة صحيحة وأخرى خاطئة، وانما اجاباتكم تعد صحيحة - فقط - طالما تعبر عن حقيقة شعورك تجاه المعنى الذي تحمله العبارة.

لاتضع أكثر من علامة أمام عبارة واحدة مع التأكد من عدم ترك أي عبارة بدون إجابة، علما ان الاستبانة سوف تحضَ أجابتك بخصوصية وسرية مطلقة وتستعمل الاستبانة لغرض البحث العلمي فقط

. يرجى التحقق من أنك أجبت على كافة الأسئلة .

مع خالص الشكر والامتنان لتعاونكم معنا خدمة لأهداف الدراسة

الباحث / طالبة الدكتوراه

زهراء علي كاظم

رمز مكان جمع العينة.....

الجزء الاول: الخصائص الدموغرافيا

أ- الخصائص الديموغرافيا للاطفال

1. عمر الطفل:- ☐
2. الجنس:- ذكر ☐ انثى ☐
3. نوع الولادة :- ☐ طبيعي ☐ ☐ قيصرية اخرى
4. وزن الطفل عند الولاده:- ☐
5. تسلسل الطفل في العائله:- ☐
6. عمر الطفل عند التشخيص:- ☐
7. نوع الرضاعة:- طبيعية ☐ صناعية ☐ مختلطة ☐
8. الوزن الحالي للطفل:- ☐ كغم
9. عدد ساعات النوم:- ☐ ساعة\اليوم
10. التاريخ العائلي للمرض:- نعم ☐ لا ☐

ب- الخصائص الديموغرافيا للامهات:

1. عمر الام:- ☐

2. الحالة الاجتماعية للام:-

متزوجة. ☐

ارملة ☐

منفصلة. ☐

مطلقة. ☐

3. التحصيل الدراسي للام:-

امي ☐

تقرا وتكتب ☐

خريجة ابتدائي. ☐

خريجة متوسطه ☐

خريجة اعداديه ☐

خريجة بكالوريس فاكثر ☐

4. مهنة الام:- موظفة ☐ ربة بيت ☐

5. السكن:- ريف ☐ حضر ☐

6. استعمال ادوية كموانع للحمل :- نعم ☐ لا ☐

الجزء الثاني:- عوامل الخطورة

عوامل خطورة للام والطفل		
أ- اثناء الحمل للام:-	نعم	لا
1- ارتفاع الضغط		
2- سكر الحمل		
3- السمنة		
4- التدخين		
ب-اثناء الولادة للطفل:-		
1. ولادة مبكرة		
2. تعسر الولاده		
3. الاختناق		
4. بلع او استنشاق السائل الامنوسي		
5. بلع او استنشاق العقي		
6. عوامل وراثية (توأم)		
ت-خلال الطفولة المبكرة		
1. يتناول الكثير من الاطعمة المعلبة.		
2. الوجبات السريعة جزء من وجباتة الرئيسية اليومية.		
3. روتين الطفل الغذائي يتضمن الكثير من السكريات والمحليات الصناعية.		
4. الرفض من احد الابوين.		
5. توتر الطفل (الموت المفاجئ , الانفصال او الطلاق).		

الجزء الثالث:- خبرة الأمهات نحو الجانب الادراكي

ت	العناصر	كلا	احيانا	دائما
.1	اصرخ عليه لانه ضعيف القدرة على التركيز والانتباه.			
.2	اتكلم معه بصوت مرتفع كي يستيقظ من الشرود واحلام اليقضة.			
.3	استخدم كلمات امر حتى ينجز مهامه.			
.4	اكثر من النصح والوعظ عندما يرتبك ويعاني من الحيرة.			
.5	الومه عندما ينتقل من نشاط الى اخر دون مبرر.			
.6	اصرخ عليه لانه لايتواصل معي بصريا عندما يكلمني.			
.7	اغضب عليه عندما لا يستمع او يصغي الى التعليمات التي تقدم اليه.			
.8	اتضايق عندما ينشغل بذاته، اصابعه، ملابسه او شعره.			
.9	اجعله من السهل قيادته من الغير عن طريق الامر.			
.10	احرمة من الاشياء التي تثيره وتشتت انتباهه.			
.11	الومه لانه دائما ما ينسى اشيائه الخاصه وادواته.			
.12	انصحة بكثرة حتى لا يتعرض الى الحوادث بسبب نقص انتباهه.			
.13	احرمه من الوقت المخصص للعب عندما يفشل في تنظيم مهام يومه.			
.14	اتضايق منه لانه قليل الشهية.			
.15	اصرخ علية لانه بطئ بتناول الطعام.			
.16	اكثر من لومه لانه يندفع للاجابة عن السؤال قبل ان يكتمل.			
.17	اوبخه لانه يفشل في اتمام المهام وغير قادر على متابعة التفاصيل.			
.18	اكثر من نصـــحه لانه يحدث صـــخبا غير لائق في الوقت الذي لايجب عليه ذلك			
.19	اسخر منه لانه بطئ التعلم.			

الجزء الرابع: خبرة الأمهات نحو الجانب الحركي والاجتماعي

ت	العناصر	كلا	احيانا	دائما
.1	اهدده بعدم الخروج مرة اخرى عندما يجري ويقفز ويتسلق.			
.2	اتوعده بالضرب عندما يقوم باعمال مرفوضة من الاخرين.			
.3	امنعه من تربية الحيوانات لانه قاسي عليها.			
.4	اوبخه لانه كثير التملل والوقوف دائما ومتاهب للانطلاق.			
.5	اعاقبه عندما يتصرف بسلوك طفولي وغير ناضج.			
.6	اصرخ عليه عندما يقاوم النظام والقواعد ويخالف المواعيد.			
.7	الومه عندما يرفض التعاون مع اخوته او الاخرين.			
.8	اضربه عندما يقم بسرقة شي من اخوته او الاخرين.			
.9	اجادله عندما يطيع الاوامر باستياء او بامتعاض.			
.10	اصفه بكلمات قاسية عندما يقوم باعمال تخربيه او وحشية.			
.11	اصدر عليه الاحكام عندما يتمرد او يكون غير مطيع او عنيد.			
.12	اقارن بينه وبين اخوته واصدقائه لان كلامه غير واضح ومختلف.			
.13	اعاقبه لانه يرفض الاعتذار عندما يخطئ.			
.14	اعاقبه عندما يتلف العابه او يبعثرها.			
.15	اصرخ عليه عندما يصر على تلبية مطالبه في الحال.			
.16	اناديه بالقاب تزعجه عندما يشاكس ويشاغب.			
.17	اعاقبه لانه محب للعراك ودائما في حالة غضب وهياج واستياء			
.18	احرمه من الوقت المخصص للعب عندما يقفز على الاثاث ويستمر بالجري التسلق.			
.19	اصرعليه بالاعتراف باخطائه واحقق معه كثيرا			
.20	اكثر من تانيبه لانه اندفاعي ومن السهل استثارته.			

الجزء الخامس: خبرة الأمهات تجاه الانفعالات العاطفية.

ت	العناصر	كلا	احيانا	دائما
.1	اوبخه لانه يطيل السهر ويرفض النوم مبكرا.			
.2	اعاقبه عندما يروي قصصا غير حقيقية او كاذبة.			
.3	اقارن بينه وبين اخوانه عندما يتجنب المهام الصعبة التي تتطلب جهدا جسديا او عقليا.			
.4	اسخر منه كونه شديد الحساسيه وسريع البكاء عندما يوجه اليه نقدا			
.5	ابالغ في اظهار الحب والاهتمام لاخيه \ اخته لكي اشد انتباهه واثير عاطفه.			
.6	اصرخ عليه عندما لا يستطيع الانسجام مع اخوته او الاخرين.			
.7	اسخر منه عندما يمص او يمضغ اصبعه او الملابس او البطانية.			
.8	اكثر من تانيبه لانه صعب في تكوين صداقات مع الاخرين او التواصل معهم.			
.9	اضربه عندما يفجر انفعالاته ويحدث سلوكا غير متوقع.			

Healthy Development and Autistics Spectrum Disorders in Children related to their Mothers Experiences in Early Childhood: A Comparative Study

Location code of Sample collection ……..

Part one: demographic characteristics

A- Child's demographic characteristics

1. Child's ☐ age: -
2. Gender: - ☐ Male ☐ Female
3. Type of delivery for Child: -

   ☐ Normal vaginal delivery

   ☐ Cesarean section

   ☐ Others
4. The weight of the child at ☐ birth: -
5. The sequence of the child in the ☐ family:
6. The child's age at diagnosis: - ☐
7. Type of Child Feeding: - ☐ ☐ ☐

   Breastfeeding Artificial mixed
8. The current weight of the child: ☐ - kg
9. Sleep ☐ Hours hours \ day
10. Family history of the disease: ☐ - ☐ Yes No

B- Mothers' Demographic Characteristics

1. Mother's ☐ age: -

2. Marital status: -

☐ Married

☐ Widow

☐ Separate

☐ Divorced

3. Educational Status: -

Unable to read and write ☐

Able to Read and write ☐

Elementary graduate ☐

Intermediate graduate ☐

Undergraduate graduate ☐

Bachelor's degree or more ☐

4. Mother’s employment: -

Employee ☐

Housewife ☐

5. Residency: -

Rural ☐

Urban ☐

6. **Use of medicines as contraceptives:** Yes ☐ No ☐

Part two: risk factors

Risk factors for mothers and child.	Yes	No
A- During pregnancy for mothers		
1. Hypertension		
2. Gestational diabetes		
3. Obesity		
4. Smoking		
B- During childbirth for child		
1. Prematurity		
2. Fetal distress		
3. Perinatal asphyxia		
4. Aspiration amniotic fluid		
5. Aspiration meconium		
6. Genetic factors (Twins)		
C- During Early childhood		
1. He eats a lot of canned foods		
2. Fast food is part of his daily main meals		
3. The child's nutritional routine includes a lot of sugars and artificial sweeteners		
4. Parental rejection		
5. Child stress from (sudden death, separation or divorce).		

Part Three: - Mothers experience toward cognitive achievement

N	Items	Never	Sometimes	Always
1.	Shout at him because he is weak in the ability to focus and attention.			
2.	Speak to him out loud to wake up from wandering and daydreaming.			
3.	Use the words of a command to accomplish its tasks.			
4.	More than advice and preaching when confused and suffers from confusion.			
5.	The pain when it moves from one starch to another without justification.			
6.	I yell at him because he doesn't make eye contact with me when he talks to me.			
7.	Get angry at him when he does not listen or listen to the instructions given to him.			
8.	I get annoyed when he is preoccupied with himself, his fingers, his clothes or his hair.			
9.	Make it easier to lead by command.			
10.	Deprive him of the things that arouse him and distract him.			
11.	The blame is because he always forgets his own things and tools.			
12.	I advise a lot so that he does not get into accidents because of his lack of attention.			
13.	Deprive him of playing time when he fails to organize his day's tasks.			
14.	I get annoyed with him because he has little appetite.			
15.	Shout at him because he's slow to eat.			
16.	More than blaming him for rushing to answer the question before it is completed.			
17.	Reprimand him for failing to complete tasks and unable to follow up on details.			
18.	More than advised him because he makes an inappropriate noise when he shouldn't			
19.	Make fun of him because he is a slow learner.			

Part Four: Mothers experience toward Social and Motor Achievement.

N	Items	Never	Sometimes	Always
1.	Threaten him not to go out again when he runs and jumps and climbs.			
2.	I promise to hit him when he does things rejected by others.			
3.	Ban him from raising animals because he is cruel to them.			
4.	I scold him for being too bored and always standing up and ready to go.			
5.	Punish him when he behaves childishly and immaturely.			
6.	Shout to him when he resists rules and regulations and breaks deadlines.			
7.	Blame when he refuses to cooperate with his brothers or others.			
8.	Hit him when he steals something from his brothers or others.			
9.	Argue him when he obeys orders resentfully or resentfully.			
10.	Describe him in harsh words when he commits acts of vandalism or brutality.			
11.	Sentence him when he is rebellious, disobedient or stubborn.			
12.	I compare him with his brothers and friends because his words are not clear and different.			
13.	I punish him because he refuses to apologize when he makes a mistake.			
14.	Punish him when he damages his toys or scatter them.			
15.	Shout at him when he insists on meeting his demands at once.			
16.	I call him nicknames that annoy him when he quarrels and naughty.			
17.	I punish him because he loves to fight and is always in a state of anger, rage and resentment			
18.	Deprive him of playing time when he jumps on furniture and keeps running and climbing.			
19.	Insist on him to admit his mistakes and investigate him a lot			
20.	More than a reprimand because it is impulsive and easy to provoke.			

Part Five: - Mothers experience toward emotions Achievement

N	Items	Never	Sometimes	Always
1.	I scold him because he stays up late and refuses to sleep early.			
2.	I punish him when he tells untrue or false stories.			
3.	I compare him to his brothers when he avoids difficult tasks that require physical or mental effort.			
4.	I make fun of him for being very sensitive and quick to cry when he criticizes him			
5.	Exaggerating in showing love and attention to his brother / sister in order to attract his attention and arouse his affection.			
6.	Make fun of him when he sucks or chews his finger, clothes, or blanket.			
7.	More than a reprimand because it is difficult to make friends with others or communicate with them.			
8.	Shout at him when he can't get along with his siblings or others.			
9.	Hit him when he explodes his emotions and occurs unexpected behavior.			

Ministry of Higher Education and Scientific Research
University of Babylon
College of Basic Education

وزارة التعليم العالي والبحث العلمي
جامعة بابل
كلية التربية الاساسية

No.: ٨٥٢١
Date: ٢٠٢٣/٥/٢٨

كلية التربية الاساسية
شعبة الموارد البشرية
الصادرة

الى/جامعة بابل/كلية التمريض
م/ تقويم لغوي

تهديكم اطيب التحيات ...

كتابكم ذو العدد ١٩٦٧ في ٢٠٢٣/٥/٢٢ نعيد اليكم اطروحة الدكتوراه للطالبة (زهراء علي كاظم) الموسومة بـ (التطور الصحي واضطرابات طيف التوحد عند الاطفال المتعلقة بخبرات امهاتهم في مرحلة الطفولة المبكرة دراسة مقارنة)) بعد تقويمها لغوياً واسلوبياً من قبل (ا. صبيحة حمزة دحام) وهي صالحه للمناقشة بعد الاخذ بالملاحظات المثبتة على متنها .

... مع الاحترام...

المرفقات //
- اطروحة دكتوراه.
- اقرار المقوم اللغوي

أ.د. فراس سليم حياوي
معاون العميد للشؤون العلمية
٢٠٢٣/٥/٢٨

نسخة منه الى //
- مكتب السيد العميد المحترم ...للتفضل بالاطلاع مع الاحترام.
- ا. صبيحة حمزة دحام.. للعلم لطفاً.
- الشؤون العلمية
- الصادرة

نادية

العراق - بابل - جامعة بابل
بدالة الجامعة ٠٠٩٦٤٧٢٣٠٠٣٥٧٤٤
مكتب العميد ١١٨٤
المعاون العلمي ١١٨٨
المعاون الاداري ١١٨٩
وطني ٠٧٢٣٠٠٣٥٧٤٤
امنية ٠٧٦٠١٢٨٨٥٦٦
basic@uobabylon.edu.iq

Panel of expert

ت	اسم الخبير	الشهادة	اللقب العلمي	مكان العمل	الاختصاص الدقيق	سنوات الخبره
.1	د. امين عجيل الياسري	دكتوراه	استاذ	جامعة بابل\كلية المريض	تمريض صحة المجتمع	38
.2	د. عبد المهدي عبد الرضا	دكتوراه	استاذ متمرس	جامعة بابل\كلية المريض	تمريض الصحة النفسية والعقلية	44
.3	د. سجاء هاشم محمد	دكتوراه	استاذ متمرس	جامعة بابل \ كلية التمريض	تمريض الصحة النفسية والعقلية	41
.4	د. عفيفة رضا عزيز	دكتوراه	استاذ	جامعة بغداد\كلية التمريض	تمريض صحة الطفل والمراهق	41
.5	د. سلمى كاظم جهاد	دكتوراه	استاذ	جامعة بابل\كلية المريض	تمريض صحة المجتمع	38
.6	د. ناجي ياسر سعدون	دكتوراه	استاذ	جامعة بابل\كلية المريض	تمريض صحة المجتمع	34
.7	د. سحر ادهم علي	دكتوراه	استاذ	جامعة بابل \ كلية التمريض	تمريض صحة البالغين	28
.8	د. هالة سعدي عبد الواحد	دكتوراه	استاذ	جامعة بغداد\كلية التمريض	تمريض صحة الطفل والمراهق	28
.9	د. خميس بندر عبيد	دكتوراه	استاذ	جامعة كربلاء \كلية التمريض	تمريض صحة الطفل والمراهق	22
.10	د. جنان اكبر شكور	دكتوراه	استاذ مساعد	جامعة كركوك\كلية المريض	تمريض صحة الام والوليد	32
.11	د. فاطمة وناس	دكتوراه	استاذ مساعد	جامعة الكوفة\كلية التمريض	تمريض صحة المجتمع	30
.12	د. محمد باقر حسن	دكتوراه	استاذ مساعد	جامعة الكوفة\كلية التمريض	تمريض صحة الطفل والمراهق	19
.13	د. عذراء حسين شوق	دكتوراه	استاذ مساعد	جامعة بغداد\كلية التمريض	تمريض صحة الطفل والمراهق	18
.14	د. احمد عبد الله	دكتوراه	استاذ مساعد	جامعة ذي قار\كلية التمريض	تمريض صحة الطفل والمراهق	16
.15	د. زيد وحيد عاجل	دكتوراه	استاذ مساعد	جامعة بغداد\كلية التمريض	تمريض صحة الطفل والمراهق	15
.16	د. وفاء احمد امين	دكتوراه	استاذ مساعد	جامعة بابل\كلية المريض	تمريض صحة الام والوليد	14
.17	د. حيدر حمزه علي	دكتوراه	استاذ مساعد	جامعة الكوفة \ كلية التمريض	تمريض الصحة النفسية والعقلية	13
.18	د. . ريان ابراهيم خليل	دكتوراه	مدرس	جامعة الموصل \كلية التمريض	تمريض صحة الطفل والمراهق	13

ذات دلالة إحصائية بين استجاباتهم للمقارنة بين تجربة الأم المتعلقة بأبنائهم في كلا المجموعتين (الأصحاء وذوي التوحد) نحو التحصيل المعرفي والانفعالي والاجتماعي والحركي.

الاستنتاج: كان التقييم العام لتجربة الأمهات مع الأطفال الأصحاء جيدًا، في حين كانت تجارب الأمهات مع أطفال اضطراب طيف التوحد ضعيفة فيما يتعلق بخبرات الأمهات في التحصيل المعرفي والعاطفي والاجتماعي والحركي. تظهر المقارنة بين تجارب الأمهات المتعلقة بأبنائهن في كلا المجموعتين (الأصحاء وذوي التوحد) وجود فروق ذات دلالة إحصائية بين استجابات الأمهات نحو التحصيل المعرفي والاجتماعي والحركي والانفعالي.

التوصيات: أوصت الدراسة بتطوير المراكز المتخصصة في اضطراب طيف التوحد وكذلك ضرورة تثقيف وتدريب الأمهات على الكشف المبكر وإدارة الأطفال المصابين باضطراب طيف التوحد.

المستخلص

الخلفية: يمكن أن يكون لأحداث الحياة المبكرة تأثير قوي على كل من نمط بنية الدماغ والتطور السلوكي. يتركز الكثير من الاهتمام على التجربة المبكرة، حيث أن تأثير الصحة العقلية للطفل على نمو الطفل والمجتمع ككل موثق جيدًا ولكن غير معترف به. لدى الجمهور وعي محدود بكيفية تأثير الصحة العقلية على نمو الطفل ورفاهية المجتمع بشكل عام، ومدى أهمية تلبية احتياجات الصحة العقلية، والأساس العلمي لتعزيز الصحة العقلية والوقاية من الاضطرابات وعلاجها.

هدف الدراسة: تهدف الدراسة إلى معرفة المقارنة بين النمو الصحي واضطرابات طيف التوحد لدى الأطفال وعلاقتها بتجارب أمهاتهم في مرحلة الطفولة المبكرة.

تصميم الدراسة: تم اختيار "التصميم المقطعي الكمي - الوصفي" لتأكيد أهداف البحث: النمو الصحي واضطرابات طيف التوحد لدى الأطفال المرتبطة بتجارب أمهاتهم في مرحلة الطفولة المبكرة: دراسة مقارنة للفترة من كانون الاول 2021 إلى اذار 2023.

مكان الدراسة: أجريت الدراسة في محافظة بابل في مدينة الحلة والتي شملت رياض الأطفال ومراكز التوحد.

العينة: هدفية – تم اختيار عينة غير احتمالية لتحقيق أهداف الدراسة مكونة من (138) أم لديها أطفال في رياض الأطفال و (133) أم لديها أطفال مصابين باضطراب طيف التوحد في مدينة الحلة.

المنهجية: جمع البيانات من خلال أداة معتمدة من مراجعة الأدبيات واسعة النطاق، يتكون استبيان الدراسة من خمسة أجزاء. وتم التحقق من صحة النتائج من خلال توزيع الاستبيان على (18) خبيراً، فيما بلغت الثبات (0.93) من (0.70) وهي مقبولة إحصائياً.

النتائج: معظم الأطفال الأصحاء 64 (46.4%) في عمر 5 سنوات، في حين أن 52 (39.1%) من الأطفال المصابين باضطراب طيف التوحد في عمر 6 سنوات. 74 (53.6%)، 94 (70.7%) كانوا من الذكور. تم إرضاع 63 طفلاً (45.7%) من الأطفال الأصحاء، بينما سجل معظم أطفال اضطراب طيف التوحد الرضاعة الصناعية بنسبة 47 (35.3%). وجود فروق

جمهورية العراق

وزارة التعليم العالي والبحث العلمي

جامعة بابل

كلية التمريض

التطور الصحي واضطرابات طيف التوحد عند الاطفال المتعلقة بخبرات امهاتهم في مرحلة الطفولة المبكرة : دراسة مقارنة

اطروحه دكتوراه مقدمة

الى مجلس كلية التمريض ، جامعة بابل

من قبل

زهراء علي كاظم

وهي جزء من متطلبات نيل درجة الدكتوراه فلسفة في التمريض

بأشراف

الأستاذ الدكتوره نهاد محمد الدوري

شوال 1444هجري

ايار 2023 ميلادي