

**PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC
RESEARCH**



**IBN KHALDOUN UNIVERSITY -TIARET-
Faculty of Foreign Languages
Department of English**

**Dissertation Submitted in Partial Fulfilment for the Requirements of the
Degree of “Master LMD” in Linguistics**

**Submitted by KHELIFA Asmaa
KENTOUR Faiza**

**Promoting Education for Children with Autism Spectrum
Disorder**

**Case Study: Institutions of El Amal and El Wafaa of Autistic,
Down Syndrome and Mentally Retarded Children, Tiaret**

Board of Examiners:

Dr. SAHLI Naima	(Chairwoman)	University of Tiaret
Dr. BELAID Louisa	(Supervisor)	University of Tiaret
Dr. BENABED Ammar	(Examiner)	University of Tiaret

**Academic Year
2020-2021**

Abstract

This research work is devoted to reinforce tuition and maintain a positive rapport among children with Autism Spectrum Disorder (ASD). It is disquieted to instruct a child with a learning disability for both teachers and parents. Therefore, the present research aims at discovering the difficulties and challenges that ASD impose on teachers, besides the approaches that specialists adopt to develop children's behavioural and educational skills. The main issue in this research is the extent to which ASD children are exposed to different learning tasks and how they are professionally and paternally treated to increase their learning process. To undertake this research, a questionnaire, and a semi-structured interview were designed for parents, psychologists, and speech therapists, besides classroom observation for autistic children. The study revealed that there is a lack of teaching materials, and poor special needs institutions. Besides that, the psychologists and the speech therapists do not receive any special needs educational training, which leads to the unavailability of qualified teachers who are able to cope with a developmental disability. Accordingly, we recommend that the authorities should provide more support to this category of learners.

Keywords: Autism Spectrum Disorder; Educational Skills; Learning Disability; Special Needs.

الملخص

تتمحور هذه الدراسة حول تعزيز التعليم للأطفال المصابين باضطراب طيف التوحد وكيفية الحفاظ على علاقة إيجابية بينهم. يعتبر تعليم الطفل الذي يعاني من صعوبات التعلم امرا جادا وليس سهلا لكل من المعلمين وأولياء الأمور. بناء على هذا، يهدف البحث الحالي إلى اكتشاف الصعوبات والتحديات التي يفرضها اضطراب طيف التوحد على المعلمين، بالإضافة إلى الأساليب التي يتبناها المتخصصون من أخصائيين نفسانيين ومعالجي النطق، من أجل تنمية المهارات التعليمية والسلوكية للأطفال المصابين بهذا الاضطراب. حيث ان الاشكالية الرئيسية في هذا البحث تتمثل في مدى تعرض أطفال التوحد لأنشطة تعليمية مختلفة، وكيفية مساهمة المهنيين والاباء في تعزيز قدرة هذه الفئة من الاطفال على اكتساب المعرفة. في هذا الصدد، تم تصميم استبيان موجه لأباء اطفال التوحد وكذا مقابلة شبه منظمة مع الاخصائيين النفسانيين ومعالجي النطق، بالإضافة إلى الملاحظة الصفية للأطفال المصابين بالتوحد، بغرض جمع معلومات أكثر حول الدراسة الحالية. كشفت هذه الدراسة أن هناك نقص كبير في الوسائل التعليمية، والمؤسسات الملائمة لذوي الاحتياجات الخاصة. إلى جانب ذلك، عدم تلقي الأخصائيين النفسانيين ومعالجي النطق أي تدريب تعليمي او تربوي مخصص في رعاية وعلاج هؤلاء الاطفال، مما يؤدي إلى عدم توفر اخصائيين، مؤهلين ولهم القدرة على التعامل مع إعاقة النمو. وفقاً لذلك، نقترح على السلطات بأن تقدم مزيداً من الدعم لهذه الفئة من المتعلمين، واعادة النظر الى احتياجاتهم.

الكلمات المفتاحية: اضطراب طيف التوحد، المهارات التعليمية، المتعلمين ذوي الصعوبات، ذوي الاحتياجات الخاصة.

Résumé

Ce travail de recherche est consacré au renforcement de l'enseignement et au maintien d'un rapport positif chez les enfants atteints de troubles du spectre autistique (TSA). L'instruction d'un enfant atteint d'un trouble de l'apprentissage est une source d'inquiétude tant pour les enseignants que pour les parents. Par conséquent, la présente recherche vise à découvrir les difficultés et les défis que les TSA imposent aux enseignants, ainsi que les approches que les spécialistes adoptent pour développer les compétences comportementales et éducatives des enfants. La question principale de cette recherche est de savoir dans quelle mesure les enfants atteints de TSA sont exposés à différentes tâches d'apprentissage et comment ils sont traités professionnellement et paternellement pour accroître leur processus d'apprentissage. Pour entreprendre cette recherche, un questionnaire et un entretien semi-structuré ont été conçus pour les parents, les psychologues et les orthophonistes, en plus de l'observation de la classe des enfants autistes. L'étude a révélé qu'il y a un manque de matériel pédagogique et que les institutions spécialisées sont pauvres. En outre, les psychologues et les orthophonistes ne reçoivent aucune formation en matière de besoins éducatifs spéciaux, ce qui entraîne l'absence d'enseignants qualifiés capables de faire face à une déficience intellectuelle. En conséquence, nous recommandons que les autorités apportent un soutien accru à cette catégorie d'apprenants.

Mots clés : Trouble du spectre autistique ; Compétences éducatives ; Troubles d'apprentissage ; Besoins spéciaux.

ACKNOWLEDGMENTS

We would like to express our gratitude and respect to our honourable supervisor

Dr. BELAID Louisa

for her guidance, valuable directions, support, and patience to complete the
present work.

We would like to acknowledge Dr. BENABED Ammar and Dr. SAHLI Naima

For accepting to be members of the jury of

this thesis.

We are indebted to Al Amal and Al Wafaa Institutions of Autistic, Down
Syndrome, and Mentally Retarded Children, in the city of Tiaret, for their
collaboration and contribution in the development of this research work.

Dedication 1

In the name of Allah, the all Mighty, the Sustainer, the Most Merciful, all praise go to Him for enlightening my way to complete this work.

First and foremost, I would love to dedicate this dissertation to my beloved Mother ZENDAG Kheroufa, whose love knew no bounds, because she is the source of my motivation and the reason of this achievement, all my love and appreciation goes to her. I would be proud also to dedicate my work to my darling, sweetie, and lovely Daughter BOULENOUAR Chahd Djana, may ALLAH keep her safe, and to my Husband Dr. BOULENOUAR Houari, thank you for your help, support, and encouragement.

Finally, I want to dedicate my work to my Father and to all people whom I love.

Dedication 2

I would like to dedicate this dissertation to my lovely Mother who was my source of inspiration and strength, who provide me with her moral, spiritual, emotional, and endless support.

To my dear Husband for his extraordinary patience and understanding.

To my Brothers, Sisters, Friends and Classmates who shared their words of advice and encouragement to finish this study.

Faiza

Table of Contents

Abstract.....	I
Acknowledgments.....	IV
Dedication 1.....	V
Table of Contents.....	VII
List of Tables.....	X
List of Figures.....	XI
List of Abbreviations.....	XII
General Introduction.....	1

Chapter One: Literature Review

1.1. Introduction.....	3
1.2. Learning Disabilities: Historical Perspective.....	3
1.2.1. European Foundation Period (1800 to 1920).....	3
1.2.2. U.S. Foundation Period (1920 to 1960).....	3
1.2.3. Emergent Period (1960 to 1975).....	4
1.2.4. Solidification Period (1975 to 1985).....	4
1.2.5. Turbulent Period (1985 to 2000).....	4
1.3. Definitions of Learning Disabilities.....	5
1.4. Types of Learning Disabilities.....	6
1.4.1. Specific Learning Disabilities (SLD).....	6
1.4.1.1. Dyslexia.....	7
1.4.1.2. Dysgraphia.....	7
1.4.1.3. Dyscalculia.....	7
1.4.1.4. Auditory Processing Disorder (APD).....	7
1.4.1.5. Non-Verbal Learning Disorders (NVLD).....	8
1.4.2. Other Disorders that Impact Learning.....	8
1.4.2.1. Autism Spectrum Disorder (ASD).....	8
1.4.2.2. Attention Deficit Hyperactivity Disorder (ADHD).....	8
1.4.2.3. Emotional Disturbance.....	8
1.4.2.4. Speech or Language Impairment.....	9
1.4.2.5. Visual Impairment, Including Blindness.....	9
1.4.2.6. Deafness.....	9

1.4.2.7. Hearing Impairment.....	10
1.4.2.8. Deaf-blindness.....	10
1.4.2.9. Orthopedic Impairment.....	10
1.4.2.10. Intellectual Disability.....	10
1.4.2.11. Traumatic Brain Injury.....	11
1.4.2.12. Multiple Disabilities.....	11
1.5. The Nature of Learning Disabilities.....	11
1.6. Causes of Learning Disabilities.....	12
1.6.1. Genetic or Heredity Factors.....	12
1.6.2. Neurological Factors.....	12
1.6.3. Environmental Factors.....	13
1.7. Social Competence and Motivational Characteristics of Learning-disabled Children.....	13
1.8. Effects of Learning Disabilities on Individuals.....	14
1.9. Interventions for Students with Learning Disabilities.....	14
1.9.1. Resource Room.....	14
1.9.2. Visual Strategies.....	15
1.9.3. Task Organizers.....	15
1.9.4. Instructional Support.....	15
1.9.5. Computer Class.....	16
1.9.6. Art Class.....	16
1.9.7. Music Class.....	17
1.10. Autism as a Learning Disability.....	17
1.11. Conclusion.....	18

Chapter Two: Research Methodology and Data Analysis

2.1. Introduction.....	19
2.2. Description of the Study Area.....	19
2.3. Description of the Research Design.....	19
2.3.1. Choice of the Research Method.....	19
2.3.2. Target Group.....	19
2.3.3. Sampling Process.....	20
2.4. Methods of Data Collection.....	20
2.4.1. Questionnaire.....	20
2.4.2. Semi-Structured Interview.....	21

2.4.3. Observation.....	21
2.5. Description of the Research Tools.....	21
2.5.1. Description of the Questionnaire.....	21
2.5.2. Description of the Interview.....	22
2.6. Data Analysis and Interpretation of the Findings.....	22
2.6.1. Analysis and Interpretation of Parents’ Questionnaire.....	22
2.6.2. Analysis and Interpretation of Psychologists’ and Speech Therapists’ Interview.....	31
2.6.3. Observation Checklist.....	34
2.7. Conclusion.....	37

Chapter Three: Discussion and Recommendation

3.1. Introduction.....	38
3.2. The Difficulties Faced by Psychologists and Speech Therapists.....	38
3.3. Parental Involvement in the Treatment Process of ASD Children.....	38
3.4. The Social Acceptance of ASD Children.....	40
3.5. Parents-Special Needs Teachers Collaboration.....	41
3.6. Approved Approaches by Psychologists and Speech Therapists.....	42
3.7. Special Needs Teachers Proposal.....	43
3.8. Limitations of the Study.....	44
3.9. Recommendations.....	44
3.10. Conclusion.....	45
General Conclusion.....	47
List of References.....	49
Appendices	

List of Tables

Table 2.1. Personal Information of the Respondents.....	22
Table 2.2. Observation Sample Checklist.....	36

List of Figures

Figure 1.1. Absence of Chromosome, Pennington (1991).....	12
Figure 2.1.1. The child's Response when Calling his Name.....	23
Figure 2.1.2. The Child's Visual Response to an Object.....	24
Figure 2.1.3. The Child's Way Asking for Help.....	25
Figure 2.1.4. Playing and Interacting with Others.....	26
Figure 2.1.5. The Child's Imitation of his Parents.....	27
Figure 2.1.6. The Child's Reaction towards Noise.....	28
Figure 2.1.7. Attracting Parent's Attention.....	29
Figure 2.1.8. Making Unusual Behaviours.....	30

List of Abbreviations

AAIDD: America Association on Intellectual and Developmental Disabilities.

ABA: Applied Behaviour Analysis.

ADHD: Attention Deficit/Hyperactivity Disorder.

APD: Auditory Processing Disorder.

ASD: Autism Spectrum Disorder.

DTT: Discrete Trial Teaching.

EEG: Electroencephalography.

EIBI: Early Intensive Behavioural Intervention.

IDEA: Individuals with Disabilities Education Acts.

LD: Learning Disabilities.

LDA: Learning Disabilities Association of America.

NACHC: National Advisory Committee on Handicapped Children.

NICHCY: National Dissemination Center for Children and Youth with Disabilities.

NJCLD: National Joint Committee on Learning Disabilities.

NVLD: Non-Verbal Learning Disabilities.

PDD-NOS: Pervasive Developmental Disorder Not Otherwise Specified.

SLD: Specific Learning Disabilities.

TBI: Traumatic Brain Injury.

TEACCH: Treatment and Education of Autistic and Communication related handicapped Children.

U.S: United States.

USOE: Unites States Office of Education

General Introduction

Children with learning disabilities require more attention at different levels, such as the adaptation of learning programs, providing appropriate special education establishments, the availability of teaching and learning facilities, assistive technology, in addition to qualified special needs instructors, who are supposed to create a comfortable learning atmosphere. This study addresses Autism Spectrum Disorder and what impairment it imposes on disabled children and special needs teachers. Nowadays, ASD is regarded as one of the most complicated developmental disorders with no medical cure, however children with Autism show positive results when early diagnosis and intensive treatments are involved.

Autism Spectrum Disorder is a developmental condition which affects the learning process, involving challenges in social interaction and communication skills, language impairments, restricted/repetitive behaviours, and difficulties in learning; this disorder can be diagnosed at any age, but usually it is recognized before age three, in here therapeutic interventions should be included, and treatment programs must be implemented.

The main purpose of this study is to find out the educational treatment of children with Autism Spectrum Disorder in Algeria, by shedding light on the obstacles that children as well as psychologists and speech therapists face in the teaching process of disabled learners, and how they try to overcome these challenges; moreover, the investigation at hand aims to discover the effective and approved approaches used by specialists to improve learners' social, behavioural, and educational level.

Our empirical study is guided by the following objectives:

1. To find out the obstacles that children with Autism as well as instructors of special needs face in treating this impairment.
2. To see how psychologists and speech therapists overcome the issues in the teaching process of autistic children with the help of parents.

3. To find out the approaches and methods approved by specialists with disabled learners in order to improve their level.

In the light of all what has been mentioned, two research questions are raised in order to investigate the contribution of psychologists and speech therapists besides parents in the development of the autistic child's academic performance and social skills, they are outlined as follows:

- 1- What are the challenges that learners with ASD face in the institutions?
- 2- Which method that teachers of special needs adopt in the process of teaching children with ASD?

In order to answer these questions, two hypotheses are suggested:

- 1- The unavailability of appropriate special institutions, lack of financial support, absence of social protection and acceptance, are the major problems that teachers and children with Autism probably suffer from.
- 2- The LOVAAS program activities, and ABA method, are the adopted methods by specialists with autistic children in order to improve their behavioural and educational level.

The current study consists of three chapters. The first chapter is dedicated to the theoretical part which is descriptive and includes a review of the related literature. On the other hand, the second chapter is concerned with the research methodology and data analysis, involving a questionnaire, and a semi-structured interview which were designed for parents, psychologists, and speech therapists, besides classroom observation for autistic children, these data collection tools help the researchers to get credible and reliable information concerning Autism and autistic children. Additionally, the third chapter revolves around the discussion of the findings and results of the investigation, in addition to the suggested recommendations that may help in promoting education for this category of learners.

CHAPTER ONE: LITERATURE REVIEW

Chapter One : Literature Review

1.1. Introduction

Learners with difficulties in specific cognitive processes and academic achievement are classified as having a learning disability. This chapter presents the background of the main topic addressed by this research, we will begin exploring the main research questions by providing an overview of the most important points related to learning disabilities and disabled children.

1.2. Learning Disabilities: Historical Perspective

The roots of learning disabilities are back to the early 1800s (Hallahan & Mercer, 2001), learning disabilities are one of the newest categories officially recognized by the U. S. Department of Education, but the origins of the concept are long-standing. According to Hallahan and Mercer (2001), the history of learning disabilities is divided into five periods, each period in the historical development of the concept “Learning Disabilities” highlights the main key figures and the main works.

1.2.1. European Foundation Period (1800 to 1920)

During this period, two main works were related to LD. The first work is about discoveries in the field of neurology, and the other one was the publication of articles and books on reading disabilities. In general, the key figures of this period focused their works on brain-behaviour relationships and reading disabilities (Hallahan & Mercer, 2001).

1.2.2. U.S. Foundation Period (1920 to 1960)

According to Hallahan and Mercer (2001), the U.S researchers of this period take an interest in the work of the Europeans, several key figures from medicine, psychology and education, focused their efforts on language, reading disabilities, perceptual, perceptual-motor, and attention disabilities, such as Samuel Orton, Grace Fernald, Marion Monroe, and Samuel Kirk.

Chapter One : Literature Review

1.2.3. Emergent Period (1960 to 1975)

Most authorities credit Samuel Kirk as the creator of the term “learning disabilities”, from about 1960 to 1975, learning disability emerged as a formal category, it was during this period that the term “learning disabilities” was introduced, the federal government included learning disabilities on its agenda, also parents and professionals founded organizations for learning disabilities, and educational programming for students with learning disabilities blossomed, with a particular focus on psychological processing and perceptual training. Numerous scholars, organizations, and committees arose at that time with efforts made to define “learning disabilities” and gain services for LD children such as Samuel Kirk, Barbara Bateman, LDA and USOE (Hallahan & Mercer, 2001).

1.2.4. Solidification Period (1975 to 1985)

The period from about 1975 to 1985 was relatively stable as the field moved toward consensus on the definition of learning disabilities, period of considerable applied research, and methods of identifying children with learning disabilities. LD finally achieved an official status as a category eligible for funding for direct services by 1975 within the 94-142 public law (Education for All Handicapped Children Act), by the early 1970s, the definition of learning disabilities formulated in 1968 by the NACHC had become the most popular one among state departments of education. The work of many scholars and institutes has remained influential up until the present day, in addition, a number of intervention programs for language, reading, and mathematics, emphasizing the systematic teaching of language sub-skills and their integration into broader language competence (Hallahan & Mercer, 2001).

1.2.5. Turbulent Period (1985 to 2000)

In the most recent period of LD history, and all efforts made in order to solidify the field, several issues have threatened to tear the field apart, however, the definitions of Learning Disabilities were further settled, through the persistent studies of many institutes on LD

Chapter One : Literature Review

learners, and the positive results they received as a result of their research. These studies concluded that Learning Disabilities may be the result of neurological dysfunction and that heredity is implicated in many cases of LD (Hallahan & Mercer, 2001).

1.3. Definitions of Learning Disabilities

Over years, many scholars, researchers, and psychologists defined the concept “Learning Disabilities” differently. Kirk (1962) defined LD as a process problem/ dysfunction, a retardation, or a disorder that affects language and school subjects such as reading, writing and math, due to a psychological handicap that may be caused by a cerebral impairment, emotional or/and behavioural disturbances. However, this disorder cannot be a result of mental retardation, sensory deprivation, or cultural and instructional factors.

In other vein, the National Advisory Committee on Handicapped Children, a creation of the United States Office of Education (USOE), that was originally headed by Samuel Kirk, claimed that:

Children with special (specific) learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic (NACHC, 1968, p.34).

According to Kirk and NACHC's definitions, that were conceptually similar, learning disabilities are mental issues that affect the language and academic performance of individuals of different ages, caused by either cerebral dysfunction, emotional or behavioural disturbance. But they did not include that mental retardation is one of the reasons that leads to a learning disability.

Another definition has been introduced by the National Joint Committee on Learning Disabilities (1988), it argued that learning disabilities is a global concept refers to a group of

Chapter One : Literature Review

disturbances that represent significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or basic mathematical skills (NJCLD, 1988).

To keep talking about the significance, respectively, we believe that the original definitions of the term “Learning Disabilities” was somehow limited in its description, thus, the definition needs to be cleaned up, as suggested by Hammil (1990): *“It is time to cease writing or talking about definitions instead of presenting and discussing a definition that the SLD field believe can be supported”* (p.83).

The National Dissemination Center for Children and Youth with Disabilities (2004), an acronym derived from its original name, National Information Center for Handicapped Children and Youth, claimed that a learning disability is a general term that describes specific kinds of learning problems, a learning disability can cause a person to have troubles in learning and using certain skills. The skills that are often affected are reading, writing, listening, speaking, reasoning, and math tasks (NICHCY, 2004).

Presently, there is no single view on the nature of a disability. However, there are two distinct understandings of the term, the first is known as a disability study, while the other is called medical sociology (Thomas, 2004).

1.4. Types of Learning Disabilities

Association of Children with Learning Disabilities (1986), presently LDA, presented the term “Learning Disabilities” as Specific Learning Disabilities (SLD), the LDA and many other mental health practitioners regard five main types of specific learning disabilities. In general, the term includes thirteen categories of learning difficulties under the IDEA (2004):

1.4.1. Specific Learning Disabilities (SLD)

The umbrella term SLD covers a group of learning challenges or disabling conditions that affect people’s basic academic performance involved in understanding or in using language, spoken or written, which disorder may manifest itself in an imperfect ability to

Chapter One : Literature Review

listen, think, speak, write, spell, or do mathematical calculations (IDEA, 2004). Specific Learning Disabilities is divided into five types:

1.4.1.1. Dyslexia

Dyslexia is a condition in which children face troubles in reading, it is also known as reading disorder, children affected with dyslexia cannot read quickly as others, they struggle recognize and decode words, in other words, they face difficulties in seeing similarities and differences in letters in addition to the inability to identify and comprehend words from a book or even with spelling (IDEA, 2004)

1.4.1.2. Dysgraphia

Dysgraphia is a writing disability, which means a child may not have the complex set of motor and information processing skills to be able to write his / her own thoughts down on a piece of paper. They struggle with writing a grammatically correct and complete sentences, and they often have poor handwriting. (Ibid)

1.4.1.3. Dyscalculia

Dyscalculia is a math-based learning disability, which results in a child having trouble identifying numbers and symbols and understanding basic math concepts. Children with dyscalculia suffer from difficulties in learning arithmetic, recognizing time, understanding numbers and doing the simple and easy mathematical calculations. (Ibid)

1.4.1.4. Auditory Processing Disorder (APD)

Auditory Processing Disorder (APD) is an auditory disability. The child has difficulties in interpreting speech, and processing information that s/he hears. A child with APD does not necessarily suffer from hearing loss, instead s/he has a hearing problem where the brain does not perceive information properly. For example, learners with APD may not recognize the difference between "cat", "rat" and "that", also the words "sixteen" and "sixty" could sound the same for them. (Ibid)

1.4.1.5. Non-Verbal Learning Disorders (NVLD)

Children with non-verbal Learning Disorders have troubles in understanding non-verbal communication including body language, gestures, tone of voice, and facial expressions. They suffer decoding people's behaviours and interpreting social cues.

1.4.2. Other Disorders that Impact Learning

Difficulty in school does not always stem from a learning disability, other health impairment may limit the strength and energy of students with special needs unlike their peers. In addition, the Individuals with Disabilities Education Act (2004) categorize besides SLD, other conditions that affect learning negatively:

1.4.2.1. Autism Spectrum Disorder (ASD)

ASD is a neurological and developmental disability significantly affecting behaviour, social interaction, verbal and non-verbal communication, it can be diagnosed at any age, but generally evident before age three. Autism adversely affects the child's educational performance, cognitive processes, and social skills. So far, ASD has no single known cause, however many aspects may increase the risk such as family history, genetic mutations, and being born to older parents (Individuals with Disabilities Education Act, 2004).

1.4.2.2. Attention Deficit Hyperactivity Disorder (ADHD)

As maintained by the IDEA (2004), ADHD is a disorder that includes difficulties in staying focused, paying attention, the hyperactivity, and troubles in controlling behaviour. Children with ADHD often have problems sitting still, keeping concentrate, following instructions, staying organized, and completing homework.

1.4.2.3. Emotional Disturbance

According to IDEA (2004), several mental health problems can fall under this category. Emotional disturbance may cover various disorders such as anxiety, depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder. Emotional disturbance is a case

Chapter One : Literature Review

that indicate one or group of characteristics over a long period of time, adversely affects people's educational performance. Individuals with emotional disturbances are unable to learn even with no intellectual or health impairments, they also face problems in social relationships through their inability to maintain or build interpersonal relationships with others. Emotional disturbances create inappropriate feelings and behaviours under normal circumstances of the person and usually h/she has mood swing between sadness, happiness and depression (IDEA, 2004)

1.4.2.4. Speech or Language Impairment

Speech or language impairment refers to difficulties in using language, it is a communication disorder such as stuttering, impaired articulation, a language impairment, or a voice impairment that adversely affects a child's educational performance. Children of this category have troubles in pronouncing words, producing sounds, expressing themselves, understanding spoken and/or written language (IDEA, 2004).

1.4.2.5. Visual Impairment, Including Blindness

As the term indicates, a visual impairment involves an issue with sight which interferes with learners' academic pursuits. Visual impairment is an impairment in vision that, even with correction, it adversely affects a child's educational performance. The term includes both partial sight and blindness.

1.4.2.6. Deafness

An inability to comprehend verbal language due to a disability to hear. According to IDEA (2004) deafness is a hearing impairment that is so severe, kids with a diagnosis of deafness are impaired in processing linguistic information through hearing, with or without amplification, and even with a hearing aid.

1.4.2.7. Hearing Impairment

The IDEA (2004) claimed that, hearing impairment refers to a hearing loss or damage, it is a type of disability that is approximately similar to deafness but not the same, this type of loss can change over time. Facing troubles in hearing is not the same thing as having problems with auditory or language processing, a hearing loss above 90 decibels is generally considered deafness, which means that a hearing loss below 90 decibels is classified as a hearing impairment

1.4.2.8. Deaf-blindness

According to IDEA definition of the term “deaf-blindness” refers to a child with both hearing and vision intense loss, the combination of which causes such severe absence of communication and other developmental and educational needs that they can only be accommodated in special education programs for children with deafness and with blindness (IDEA, 2004).

1.4.2.9. Orthopedic Impairment

When children lack function in their bodies, it is called a severe orthopedic impairment. Orthopedic impairment is a physical disability which adversely affects the academic performance of individuals, according to IDEA the term includes different impairments, some of them are caused by a congenital anomaly, others could be caused by many diseases such as poliomyelitis and bone tuberculosis, also impairments from different reasons like cerebral palsy, amputation, and fractures or burns that cause contractures.

1.4.2.10. Intellectual Disability

Intellectual disability, formerly labelled “mental retardation”, it is a neurodevelopmental disorder, children with this type have a sub-average intellectual ability than peers, they may also have poor communication, self-care, social skills, deficits in adaptive behaviour and mainly deficit in the educational performance which leads to a slow, special and different

Chapter One : Literature Review

learning / teaching process. Down syndrome and Autism are examples of an intellectual disability (IDEA, 2004)

1.4.2.11. Traumatic Brain Injury

As stated by the IDEA (2004), TBI is an acquired injury to the brain caused by external physical force or an accident, it applies to open or closed head injuries resulting impairments in one or more areas, such as cognition, language, memory, attention, reasoning, physical functions, speech, and many others. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma, they do not fall under TBI.

1.4.2.12. Multiple Disabilities

Multiple disabilities refer to simultaneous impairments in which a child has more than one condition such as blindness, orthopedic impairment, intellectual disability..., the combination of which causes such severe educational needs that they cannot be accommodated in a special education program solely for one of the impairments. Special needs students are categorized under this type. The term does not include deaf-blindness.

1.5. The Nature of Learning Disabilities

According to Silver (1991,1996), LD are described based on the input-integration-memory-output model. The first task in learning is to receive the information and record it in the brain (input). Once recorded, this information must be handled in such a way that it can be understood and organized (integration). The third process is storage and retrieval (memory). Finally, information must be communicated from the brain (output). Cybernetics model is used by the psychological and educational assessments in order to evaluate learning disabilities and probable learning disabilities (Silver, 1991, 1996).

1.6. Causes of Learning Disabilities

1.6.1. Genetic or Heredity Factors

According to Pennington (1991), learning disabilities are genetically determined with genetic traits manifesting themselves in the neuroanatomy and neurophysiology of the child. These structural-physiological characteristics are manifested as learning disabilities. Support for genetic theory is found in studies that show that learning disabilities run in families. The concordance rate is higher for identical than fraternal twins for reading disorder. Some findings suggest that genes on chromosome 15 or 6 may cause a reading disorder for a minority of individuals. Critics of familial research note that high rates of learning disabilities within families could reflect family environment as much as genetics.

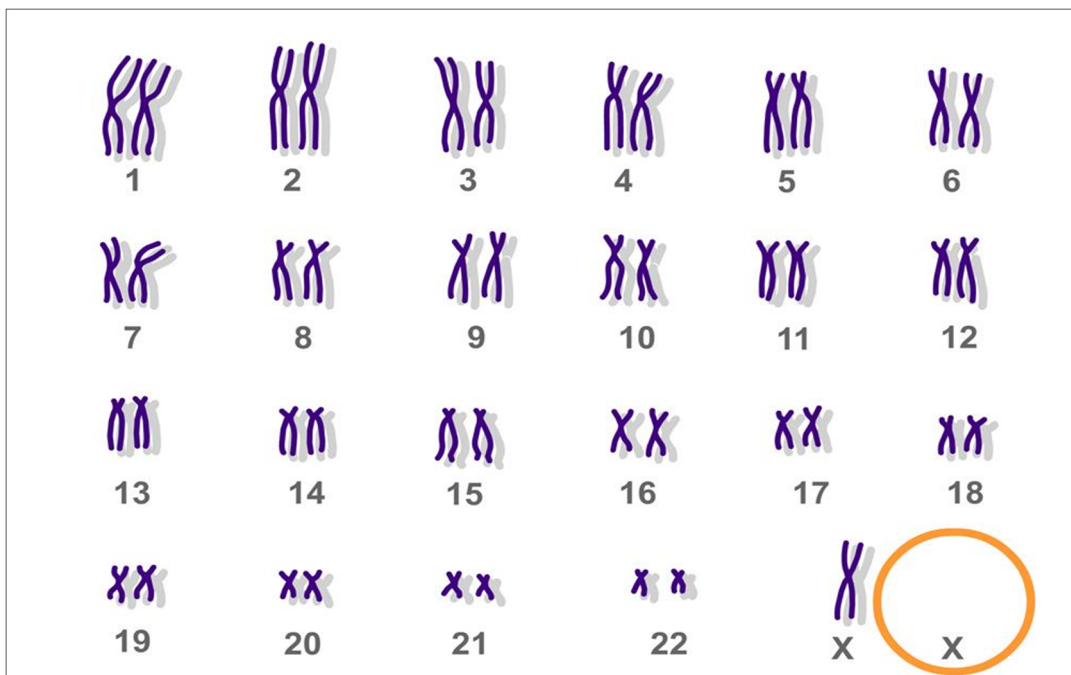


Figure 1.1. Absence of Chromosome, Pennington (1991)

1.6.2. Neurological Factors

Neurological theories state that learning disabilities is a reflection of structural damage or improper development of the nervous system. Such problems could occur during prenatal postnatal period, as the nervous system is developing. Alternatively, head injury, lack of

Chapter One : Literature Review

oxygen, exposure to toxins, seizures and nutritional deficiencies may contribute to central nervous system damage. Empirical support for neurological hypothesis comes from studies indicating EEG abnormalities in some children with learning disability. Various neuropsychological deficits are associated with learning disabilities, such as a visuospatial perception, auditory perception, semantic memory and phonemic discrimination. Children with reading disorders have left-hemisphere deficits and autonomic disorders such as eczema and allergies. Children with mathematical disorders have deficits in neuropsychological functions indicative of right hemisphere damage (Rao, 2003).

1.6.3. Environmental Factors

Silver and Hagin (2002) asserted that environmental factors contribute directly in the evolution of learning disorders. These factors such as malnutrition, prematurity, poor prenatal and post-natal health care, anxiety, poor parenting and teaching can negatively affect learning. Furthermore, taking drugs and alcohol, emotional disturbances, social and cultural deprivation take part in learning difficulties. Silver and Hagin (2002) concluded that the majority of researches pointed to the negative influence of poverty and inappropriate or inadequate motivation on children's educational level.

1.7. Social Competence and Motivational Characteristics of Learning-disabled Children

According to Gresham (1988), LD is defined as “Academic Incompetence” unlike behavioural disorders and mental retardation. Children with LD are badly accepted by others and strongly reveal deficits in positive social behaviours relative to their non-LD counterparts. Consequently, numerous researchers started showing interest in the social competence characteristics of LD learners, for Gresham, he believes that identification and remediation of social skill deficiencies as well as increasing the acceptance of LD children by peers and teachers are the critical aspects of an appropriate education to such disabled learners. The following social characteristics are displayed by disabled learners:

Chapter One : Literature Review

- Children with LD are unaware of the outcomes of their behaviours.
- LD pupils are more skilful than their peers in terms of participation and performance in school activities.
- Disabled children are less friendly than their normal mates.
- A child with learning disabilities shows negative feedback, s/he exhibits feelings of unsafety, anxiety, aggressiveness, and hypersensitivity indicating severe behaviour disturbances.

1.8. Effects of Learning Disabilities on Individuals

During examination, individuals with learning disabilities demonstrate difficulties that interfere with everyday life, such as sports, family life, and socializing with peers (Silver, 1998). Disabled learners usually show social problems. After reviewing 152 studies, Kaval and Forness (1996), concluded that about 75% of students with learning disabilities display deficits in social skills. Further, poor social skills often lead to rejection, low social status, fewer positive interactions with teachers, difficulty making friends, and loneliness (Lane, Pierson, and Givner, 2004). Some students with learning disabilities display high levels of hyperactivity, they also face other challenges such as motor coordination, time management, attention, organizational skill, emotional maturation and verbal expression (Lerner, 2005). In fact, adults with LD have difficulties performing tasks such as shopping, budgeting, filling out a job application, or reading a recipe.

1.9. Interventions for Students with Learning Disabilities

1.9.1. Resource Room

As noted by Adamovycz (2008), teachers found that learners integrated in special educational classrooms have more time and opportunity to work with colleagues in groups. The resource room is a separate, remedial classroom in a school where learners with educational disabilities such as specific learning disabilities are given direct and special

Chapter One : Literature Review

education program or instruction, individually or in a small group, aiming at develop and succeed the academic performance of students identified with learning difficulties. Resource rooms are learning spaces staffed by special education teachers who provide disabled learners with academic remediation, support and assistance with homework and related assignments. Special education students have fewer stigmas from feeling different or not as smart as the rest of their classmates. They have better attitudes toward teachers and students.

1.9.2. Visual Strategies

Hodgdon (1995) stated that visual strategies are used to help autistic children in order to maintain attention and understanding the spoken language. Visual support is a term refers to using pictures, drawings, body movements, environmental cues, and other visual items with learners who have difficulties in learning or in using spoken or written language in order to enhance their communication and educational skills. Logos, symbols and road signs are considered as visual supports. It is observed that students demonstrate strength in understanding visual information compared to auditory information, using visual tools aid learners in processing language, organizing thoughts, remembering information, and many others skills such as academic skills, communication, organization, social interaction, and behavioural management (Hodgdon, 2008).

1.9.3. Task Organizers

Allowing the student choice in the sequence of academic tasks can increase rates of compliance and active academic engagement. The power of allowing the student to select the sequence of academic tasks appears to be in the exercise of choice, which for biologic reasons may serve as a fundamental source of reinforcement (Kern & Clemens, 2007).

1.9.4. Instructional Support

The important instructional support is that of the teacher. The need for effective instructional support highlights the role of the general education teacher and successful

Chapter One : Literature Review

collaboration between the special education teacher and the regular education teacher (McGregor & Vogelsberg, 1998). This particular collaboration requires new responsibilities for the inclusion teacher and the special education teacher in the inclusion classroom. According to Lawton (1999), when two or more educators deliver instructions to a group of students with learning disabilities, and both are responsible for the evaluation of the student's progress, you have co-teaching. Students participating in inclusion will have the opportunity to learn from both teachers.

1.9.5. Computer Class

A research done by Pererson-Karlan, Hourcade, Parette, and Dikter (2008) regarding writing skills suggests a positive and effective way to include students with special needs, whether they have physical or educational disability. Technology allows disabled learners to express themselves through pictures, voice output, and by having assistive technology through a computer program. The use of computers for writing gives support to language development (Pererson-Karlan et al., 2008).

1.9.6. Art Class

As stated by MacLean (2008), art classes give students with special needs the opportunity to explore experiment and interact. However, to make this applicable, teachers need to be aware of their content domain and how important this modality is and the influence it could have on the student's ability to express himself/ herself in a non-linguistic manner and interact within the class. It is necessary to understand the impact that the disability has on the development of creative thinking and expression. Goodnow (1977) maintained that: "*children's graphic art may be described not only as a visible thinking by even as a slice of life*" (p. 154).

Chapter One : Literature Review

1.9.7. Music Class

Bell (2008) reported his investigation work with special needs people and the positive influence of music on them. His case study includes a down Syndrome student who attended his class for 40 minutes during three months. Bell's study was limited to students with special needs who merely listened and enjoyed music, without giving an age range, however, they did not play instruments or composed music, the study involved only aptitude, student's needs and their ability to comprehend musical concepts, and how they could execute musical exercises. Other studies had shown that students with hearing impairments, Autism, Down Syndrome, and Williams Syndrome can excel and enjoy music, it is by music, that they are able to express themselves, their feelings and their ideas (Jahns, 2001; Shore, 2002; Stambaugh, 1996; VanWeelden, & Whipple, 2007; Waugh & Riddoch, 2007).

1.10. Autism as a Learning Disability

At this point of our research, we would like to address Autism Spectrum Disorder (ASD), simply for the reason that it is the most common type of learning disability besides Down Syndrome among our Algerian society.

Autism Spectrum Disorders (ASD) are a group of five closely-related neurobiological disorders, including Autistic Disorder, Asperger's Disorder, Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS), Childhood Disintegrative Disorder, and Rett's Disorder. ASD is among the most disabling and mystifying of all childhood developmental disorders because these individuals have an atypical pattern of development that affects multiple areas of functioning (Hilt & Metz, 2008; World Health Organization, 2006).

According to Emmons & Anderson (2015), ASD which exist on a continuum, they believe that practically in all diagnosed cases of Autism, there is a significant component of sensory dysfunction. The continuum ranges from PDD-NOS (pervasive developmental disorder, not

Chapter One : Literature Review

otherwise specified) on the mildest end of the spectrum to severely autistic on the other end of the spectrum. However, beyond recognizing ASD as a “clinical continuum,” it is personal for both of them. They want people to understand and accept all autistic children. One of the primary reasons for including these DSM-IV definitions is to highlight the criteria needed for the clinical diagnosis of an Autism Spectrum Disorder to help in early identification and early intervention, and in the development of appropriate services and individualized programming for these children (Emmons & Anderson, 2015).

1.11. Conclusion

In Algeria, the number of people with learning disorders is increasing, these disorders that may be the result of a learning disability, differ from one individual to another, children or adults, while some are not accepting the fact that they are one of this category of people, and refuse the truth that they need help. Based on this, we have chosen Autism as our subject of study in our community, which represents difficulties in learning that leads to problems in acquiring the basic academic skills and enhancing the learners’ performance. We want to conclude that this chapter has given a brief description of the notion of learning disabilities and how these disabilities affect the academic skills of LD students. So, it is clearly noticed that this study paved the way to the following chapter representing the research methodology approved and data analysis.

**CHAPTER TWO: RESEARCH METHODOLOGY AND
DATA ANALYSIS**

Chapter Two: Research Methodology and Data Analysis

2.1. Introduction

This chapter highlights the strategy and materials used in collecting and analysing data, the features outlined here describe the research approach, the design of the study, and the study arena. Hence, this part provides a description of the selected participants and the methods used with informants in order to investigate more about Autism Spectrum Disorder and Autistic children.

2.2. Description of the Study Context

This study is conducted in Algeria, the city of Tiaret. Two institutions of children with Autism Spectrum Disorder were selected, a total number of fourteen special needs education teachers composed of psychologists and speech therapists, in addition to forty-nine parents from both schools, besides sixty autistic children. The two associations are settled in the same zone in Tiaret.

2.3. Description of the Research Design

2.3.1. Choice of the Research Method

In this research paper, we selected the qualitative and quantitative approaches for our investigation, in order to obtain proper result and critically evaluate the study overall validity and reliability. We believe that the qualitative method allows us to gather descriptive information, as well as, it provides us with different answers from various perspectives. The main goal of this investigation is to shed some light on the challenges and issues that teachers and learners encounter. Meanwhile, the quantitative approach provides us with statistical percentages of the study at hand.

2.3.2. Target Group

According to Kahn and Best (2006), the target population refers to a group of people who share some common characteristics that the researcher is interested in. Furthermore, the American Psychiatric Association (1994) defined the target population as a group of

Chapter Two: Research Methodology and Data Analysis

individuals with similar characteristics and life circumstances. In our study, the target population is composed of two educational institutions of autistic children, thus, we have decided to choose a total of fourteen (14) special educational instructors (psychologists and speech therapists), and forty-nine (49) parent, besides sixty (60) children to participate in our research query.

2.3.3. Sampling Process

Sampling is a process of selecting just a small group of people as representatives from a large group called a population (Nicholas, 2006). Our sample here, which consists of psychologists, speech therapists, parents, and autistic children, is considered suitable for carrying out the research in order to achieve credible and valuable information.

2.4. Methods of Data Collection

Triangulation refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena (Patton, 1999). This study employed a triangulation method, the questionnaire administered to parents, a semi-structured interview designed to psychologists and speech therapists and an observation of children with Autism during their classes. Triangulation also has been viewed as a qualitative research strategy to test validity through the convergence of information from different sources. These methods are used in order to collect data. Also, the research includes an informal discussion with parents to obtain a better understanding and a clear feedback to clarify ambiguities.

2.4.1. Questionnaire

The aim behind choosing the questionnaire, as a main research tool, is to figure out the characteristics and behaviours that distinguish children with Autism, and collect as much as possible of data about the autistic child's daily life.

Chapter Two: Research Methodology and Data Analysis

2.4.2. Semi-Structured Interview

An interview is a form of data collection techniques which is used with qualitative methodology to carry out a research study (Byrne, 2001). An interview is the result about what interviewees and interviewers communicate together (Michler, 1986). The purpose of this interview is to obtain complete and accurate information about Autism Spectrum Disorder diagnosis from psychologists and speech therapists, as well as to gather data about the difficulties and challenges that specialists face in treating children with Autism Spectrum Disorder.

2.4.3. Observation

As a support method to the questionnaire and the interview, observation was used with the purpose of obtaining and understanding more information and details concerning autistic children behaviours and attitudes. Methodologically speaking, the questionnaire and the interview have disadvantages and we might fall into bias, thus an observation represents a support to reduce bias and subjectivity as we portray all that is observed in the institutions. The observation process may sound simple but in reality, it involves multiple tasks of work to be done during data collection, these observations were carried out in classrooms of autistic children. This study used a non-participant observation-approach, which refers to conducting an observation without participating in the activities that you are observing (Leavy & Biber, 2011).

2.5. Description of the Research Tools

2.5.1. Description of the Questionnaire

We have chosen the questionnaire besides an interview and an observation as main research tools in our study, these data collection tools have been designed for both parents as well as psychologists and speech therapists, besides an observation which took place during our attendance of classes at the level of Alamal and Alwafaa associations of children with

Chapter Two: Research Methodology and Data Analysis

Autism. The questionnaire was addressed to parents, it aims at discovering the most important symptoms that appear on autistic children at an early age, in addition, the daily behaviours and habits that the child performs, it is divided into two parts, part one consists of personal information of the parent (gender, age, occupation), and part two is composed of ten questions (Q1-Q10), the questionnaire seeks to gather general information about ASD children. In this questionnaire, some of the questions are close-ended questions, some are multiple choice questions, and others are open-ended questions.

2.5.2. Description of the Interview

A semi-structured interview has been designed for psychologists and speech therapists aiming at discovering more about Autism Spectrum Disorder and also providing the methods and approaches used with autistic children in order to develop their educational and behavioural skills, our interview contains eleven questions (Q1-Q11) investigating everything related to Autism and autistic children through different questions.

2.6. Data Analysis and Interpretation of the Findings

2.6.1. Analysis and Interpretation of Parents' Questionnaire

Gender		Age			Occupation			
Male	Female	25-35	35-45	45-60	Employee	Retired	Unemployed	Housewife
28	21	6	23	20	20	04	09	16

Table 2.1. Personal Information of the Respondents.

Question 01: What is your child's first behaviour that has distracted your attention and made you suspect that there is a problem?

Our purpose behind asking this question is to discover the signs and symptoms that appear on children at an early age and make parents worry. Different responses were collected answering our first question towards parents. The child's lack of response to his name, speech delay, and motor development delay (crawling, sitting, walking) are the most common signs

Chapter Two: Research Methodology and Data Analysis

that attracted parent's attention between the age of 8 to 12 months, besides that, many parents mention that their children make repetitive weird movements, such as swinging, turning, or flapping hands in addition to hyperactivity and the lack of eye contact. Some parents notice that their children bite their hands all the time, they also cry and scream a lot for no reason, other kids have an aggressive behaviour, they act violently until they hurt themselves, unlike a normal child, these habits make parents react. Few of respondents say that their children have lack of focus and attention, and that they prefer watching television all the day, which make them live in isolation from the outside world. Two special cases were detected in this investigation, the parents assert that their children were normal children like others until they entered school, they have been noticed that they face difficulties in school tasks, later diagnosed as learning disabilities emerged from a mild Autism Spectrum Disorder.

Question 02: At the present time, does your child respond when you call his name?

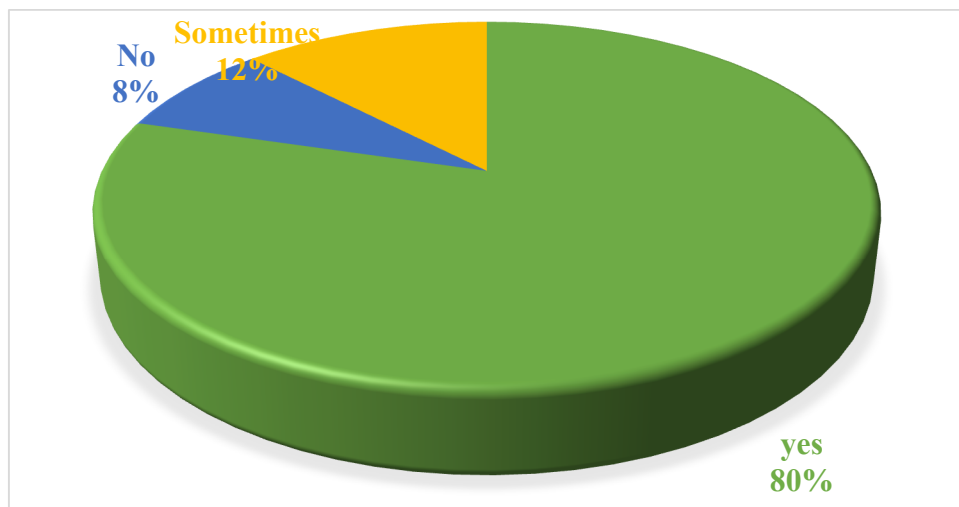


Figure 2.1.1. The Child's Response when Calling his Name.

This question aims at revealing to what extent the child with Autism Spectrum Disorder is aware when someone calls his name. The above pie-chart shows that the majority of autistic children respond when calling them by their names with a total of 80%, however, parents confirm that with practice and hard work on developing the social skills, their children

Chapter Two: Research Methodology and Data Analysis

became able to respond to their names calling. 12% of the parents say that their children sometimes respond when they hear their names, while just 8% of respondents state that when they call their children 's names, those kids have no reaction and never respond to their names when called since they were babies, which was an early indicator of Autism.

Question 03: If you point at something in the room, does your child look at it?

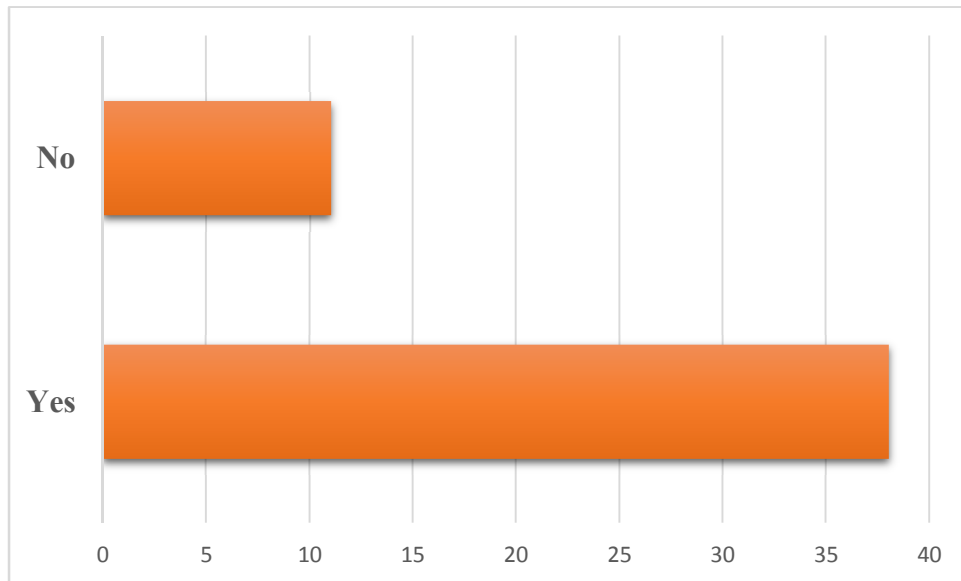


Figure 2.1.2. The Child's Visual Response to an Object.

The objective behind the third question is to find out if autistic children are attentive with their parent's actions. From the diagram shown, it is clear that 78% of respondents assert that their children react when they point at something in the room, they add that their kids are interested and curious about the thing they point at and they not indifferent regarding this matter, in contrary, 22% says that the visual response of their children, when they point their fingers to something is non-existent.

Chapter Two: Research Methodology and Data Analysis

Question 04: How does your child ask for your help when s/he needs something? For example (points his/her finger to a toy that s/he cannot access).

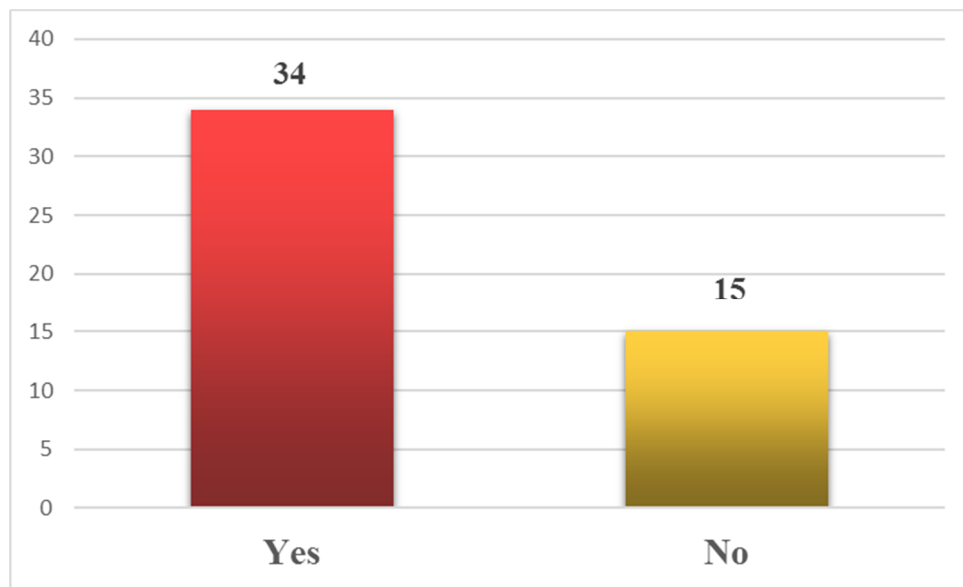


Figure 2.1.3. The Child's Way Asking for Help.

Our aim behind this question is to discover if the autistic child turns to his parents when s/he faces a situation in which s/he needs their help. The diagram above shows that most of children ask their parents for help with an average of 69%; while 31% of the parents mention that their children do not ask for help verbally, but rather than, they hold their parent's hands and take them to the thing they need or want to access.

Chapter Two: Research Methodology and Data Analysis

Question 05: Does your child respond to others and s/he is interested in playing with his/her peers?

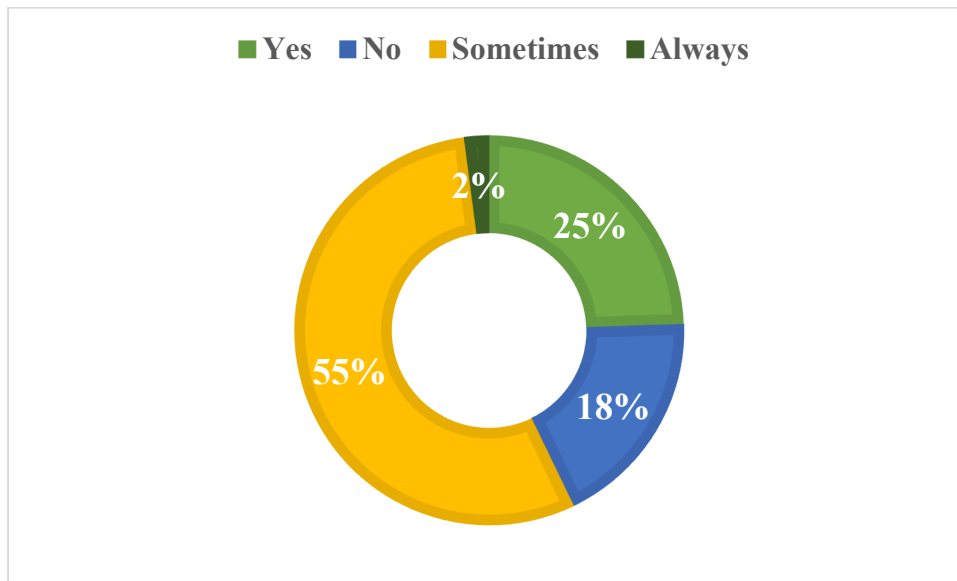


Figure 2.1.4. Playng and Interacting with Others.

The purpose of the question here is to find out if the autistic child is socialized, and to what extent s/he is interested in playing and interacting with his/her autistic peers or even normal friends. The pie-chart above represents the results obtained, 55% of the respondents say that their children sometimes play with others, while 25% confirms that their children always play with mates and interact with others like the normal kids, 18% of parents mention that playing with others and interacting with people is non-existent for their kids which means that they are introverts, and only 2% asserts that their children are interested in playing with their friends.

Question 06: Does your child imitate what you do in front of him/her? For example (praying with you or waving goodbye).

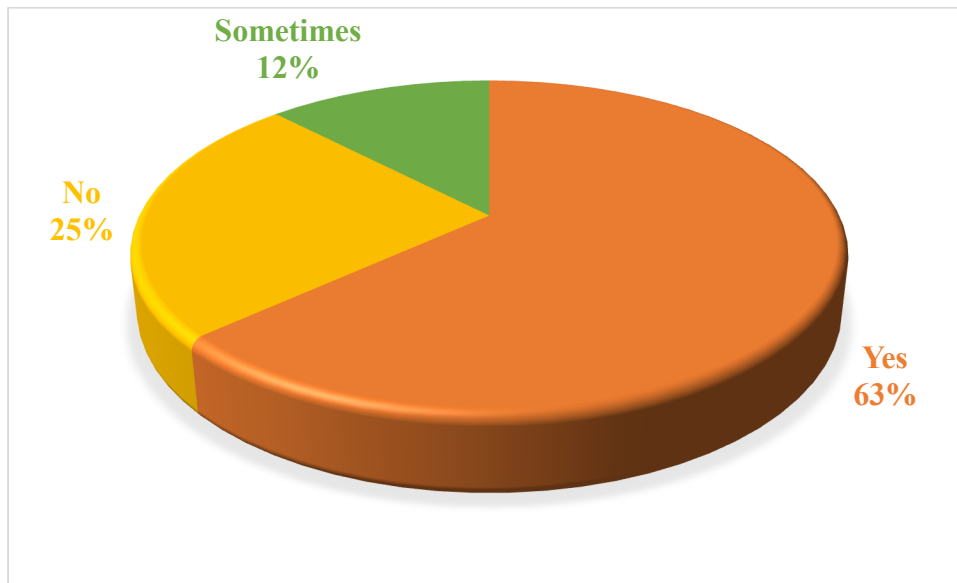


Figure 2.1.5. The Child's Imitation of his Parents.

This question aims at discovering the child's skills in developing his/her behavioural and motor capabilities through imitating others in gestures and body movement, for instance making a funny face, waving, or clapping hands. The pie-chart above shows that most of children with a total of 63% imitates their parents in some specific behaviours. According to parents' suggestions, most of the time, their kids imitate them in doing the household chores and in praying, besides that, imitating different sounds, dance and sport movements, were strongly mentioned. Other informants claim that their children do not imitate them at all with 25%; 12% of parents maintain that their kids sometimes imitate them in some habits like turning-off all the light resources before going to sleep.

Question 2.6. Is your child disturbed by the daily noise?

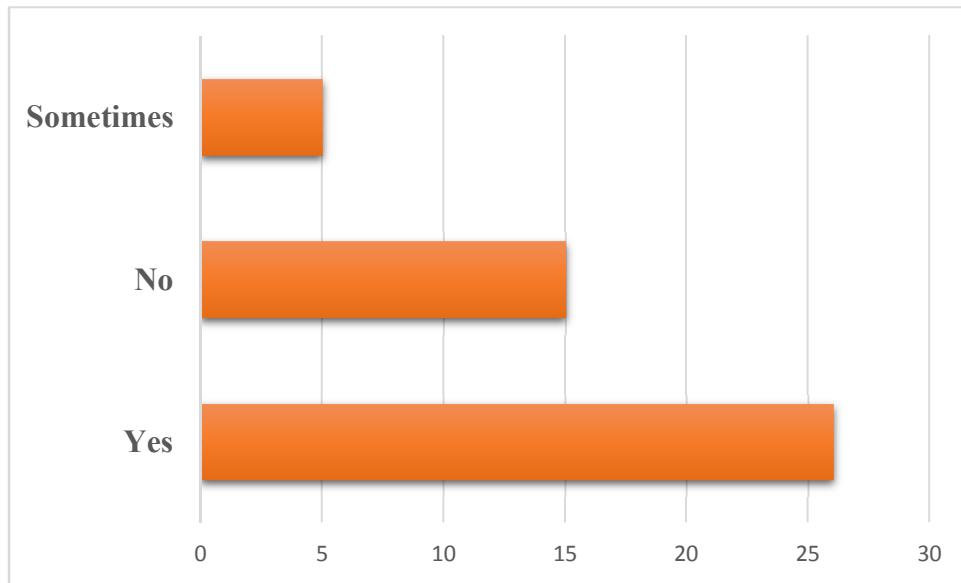


Figure 2.1.6. The Child's Reaction towards Noise.

The objective is to figure out whether the autistic child adapts to the strange or new sounds for him/her, or s/he gets upset and angry about them, and also if s/he has an interaction with the outside world. As shown in the diagram above, we discovered that 56% of children are disturbed by the daily noise, like the sounds of police cars and ambulance. However, 33% of the respondents assert that their children have a normal reaction and acceptance of the external noises, and only 11% says that their children are sometimes disturbed by the daily noise.

Question 08: Does your child try to attract your attention with his/her behaviour?

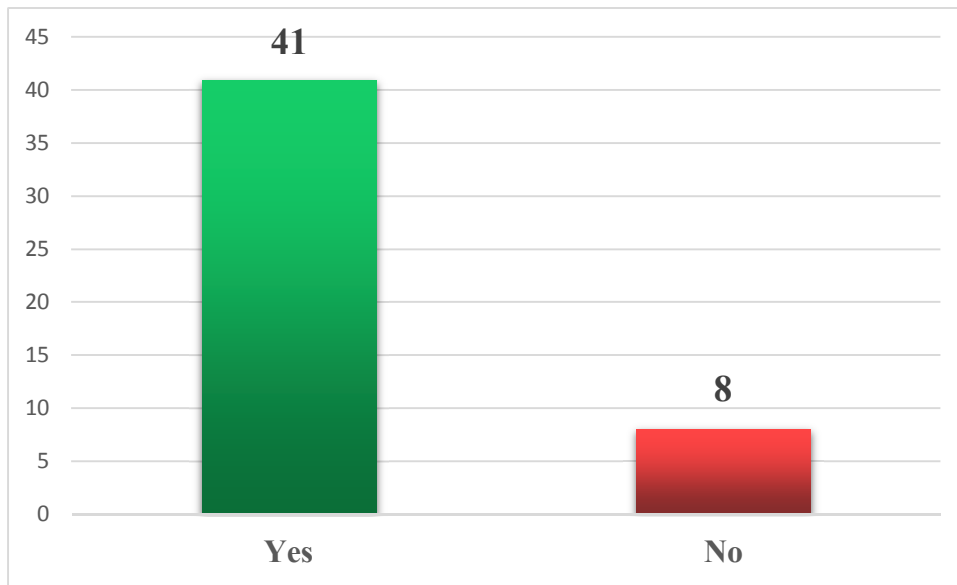


Figure 2.1.7. Attracting Parent's Attention.

The purpose of this question is to find out if the child has an interest to show his/her feelings by attracting attention, whether through naughty actions or likeable behaviours. The diagram above represents the parents' answers, 84% of children try to grab their parent's attention all the time by different attitudes, according to the parents' suggestions, most of children behave aggressively in order to attract the attention, they hit their heads against the wall, bite their hands, jump from a high place until hurting themselves, as well as scream and cry a lot without any reason. Others mention that their kids keep turning and flapping hands, besides throwing and sabotaging objects. The rest are careless and does not attempt to attract attention.

Question 09: Does your child perform strange behaviours and unusual body movements?

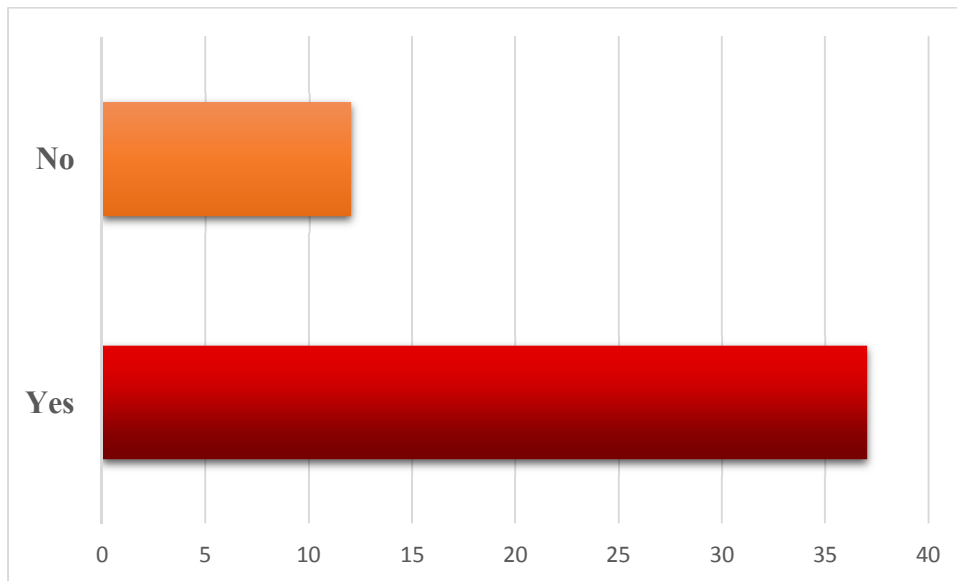


Figure 2.1.8. Making Unusual Behaviours.

The question aims at detecting the body movements that distinguish children with Autism from their normal peers. It is clearly known that autistic children act differently than normal kids, the diagram shows that 76% of informants, which represents a large number, state that their children make unusual and weird body movements, like turning, shaking the head, flapping and biting hands, other parents mention that their kids giggle or scream for no reason, in addition, there are some children who beat themselves up. Only 24% of the respondents assert that their children never make strange or unusual body movement.

Question 10: How can you understand what your child wants? From gestures and body language, understandable language, or words?

Our last question directed to parents, attempts to discover the ability of children with Autism in terms of exercising language and their skills in using vocabulary. We find out that autistic children mostly use gestures and body language in order to express their needs, while few of them use the understandable language and words.

2.6.2. Analysis and Interpretation of Psychologists' and Speech Therapists' Interview

Question 01: Before revealing that the child has an Autism Spectrum Disorder, how it can be diagnosed by the specialists?

The majority of our interviewees respond that Autism diagnosis is difficult due to the different variety of symptoms and severity of this disorder, from the mild, to the moderate, to the severe Autism, as they rely more on collecting information from parents about the child's psychomotor, development, behaviour, language, and its social interaction with others, in addition to the use of psychological tests such as the M-chat (Modified check list for autism in toddlers), and R/F program (revised with follow up).

Question 02: After confirming that the child has an ASD, how are the parents informed and made fully aware of this disorder? knowing that most people do not know what the concept "Autism" means.

Psychologists and speech therapists in both institutions confirm that having a child with Autism in the family is difficult for all its members, they assert that informing parents with this disorder should be done gradually through prior psychological preparation, by showing them how to accept their children, and try to clarify the concept ASD for them as much as possible, in order to reduce their fears and help them get through these hard times.

Question 03: Does the presence of an autistic child affect another child from the same family? How do you interpret such an effect?

All of the interviewees at the level of Alamal and Alwafaa institutions of children with Autism, agree that the presence of an autistic child at home affects another child in the same family, because the autistic child's stereotypical behaviour cause his/her brothers/sisters to gradually imitate him/her which is known as an Acquired Autism, that was already observed at the level of Alamal federation in which three brothers are affected. In addition, the psychologists mention that the autistic child is the focus of his parent's attention, and this may

Chapter Two: Research Methodology and Data Analysis

lead a healthy brother/sister to believe that his parents do not care about him/her and that s/he is marginalized.

Question 04: What are the effective and approved methods and approaches used by specialists in the teaching process of autistic children in order to enhance their behavioural and educational skills?

Our interviewees admit that they rely on some behavioural and educational approaches to adopt the teaching/learning process of disabled children, such as Applied Behaviour Analysis (ABA), TEACCH and LOVAAS programs. These methods which are used by specialists, with autistic children at the level of both associations, are considered functional and successful in order to increase the educational and behavioural skills of children with ASD, including effective parenting interventions as a part of the treatment process for Autism.

Question 05: Does the autistic child face troubles in learning? If yes, how are these learning disabilities dealt with?

According to the responses of our interviewees, not all autistic children have learning difficulties, some of them have the ability to learn and acquire new skills, as there are some classes for children with Autism in which they learn as non-disabled pupils, they are able to read and write, they know how to do mathematical calculations, they draw and listen to stories, and they interact with their fellows. The special needs educational instructors state that being able to learn and acquire new skills, is an improvement of cognitive abilities through intensive educational programs in which psychologists, speech therapists and parents are involved.

Question 06: What are the skills that children with Autism mostly absorb? Reading, writing, or math?

The psychologists and speech therapists in both institutions, assert that ASD children have unique abilities and talents that set them apart from each other, however, these abilities

Chapter Two: Research Methodology and Data Analysis

and talents are inactive, unless they receive intervention, assistance, and support from a knowledgeable person. According to the findings, we observed that children with Autism at the level of the two institutions have great abilities in writing, additionally, they have arithmetic abilities in solving complex tasks and equations, due to their exceptional abilities in memorisation and concentration, in addition to the help of special needs educators.

Question 07: Do you think autistic children have a language impairment and face linguistic communication problems?

All of the responses here confirm that most of autistic children have a lack of linguistic interaction, the interviewees assert that their abilities in using and understanding language are weak, which significantly limit their communication skills and usage of understandable language, they add that the autistic child prefers to express his/her own necessities through signs and body language; however, the psychologists and especially the speech therapists, who play an important role in this cases, believe that with intensive educational programs concerning linguistic improvement, besides parents' help, the child's language impairment will decrease by time.

Question 08: How could we develop the autistic child's linguistic skills?

Both psychologists and speech therapists agree that the language level of the autistic children gradually develops through linguistic communication between them and their parents, principally the mother, they add that early intensive care and even the development of the independent language of the child with Autism, increase his/her linguistic skills, some interviewees mention that it is necessary to minimize the use of electronic screens as much as possible to avoid children's language impairment.

Question 09: In your opinion, why Autism is observed among males more than females?

Among many points that we have noticed during our research concerning Autism Spectrum Disorder is gender, the findings here shows that most of autistic children are males,

Chapter Two: Research Methodology and Data Analysis

while females are less affected at a rate of four males for every girl. According to our interviewees, males have a genetic factor that makes them more susceptible to Autism Spectrum Disorder which is the effect on chromosome X.

Question 10: As a psychologist, what do children with Autism need the most?

The psychologists and speech therapists emphasize on the importance of the family support, love and care that an autistic child needs the most, as a first step, besides the psychological support that is quite important, followed by the development of the child's self-confidence and independence, as well as, accepting him/her as a different member of the society who is not retarded but rather unique.

Question 11: As psychologists, what are the obstacles and barriers that you face in treating Autism Spectrum Disorder?

The psychologists and speech therapists of both institutions agree that education is the only known treatment for disabled children until now, which necessitates placing children with Autism in appropriate educational settings, the last question is directed to our interviewees, it attempts to shed the light on the challenges faced by instructors in the treatment process of children with Autism Spectrum Disorder. Many obstacles were detected, among the common issues that limit the teachers' efforts are the unavailability of a unified program tailored to the Algerian context (books, assessment examinations, programs...), The lack or absence of training/configuration for the psychologists in terms of diagnosis and taking care of children with Autism, in addition to the lack of teaching materials, good institutions for disabled children, and the absence of the teamwork that includes different specialities of psychology.

2.6.3. Observation Check-list:

The research was conducted in an association for autistic children which is divided into two sections based on children's behaviour and level of acquisition. Section one is for

Chapter Two: Research Methodology and Data Analysis

disabled children who have a medium to a good level of linguistic acquisition, contact and behavioural aspects. As for section two is for disabled children who have a lower level of acquisition and high severity symptoms.

During our stay in both institutions, we have come up with the following remarks, they are outlined and mentioned in the table as follows:

- The refusal of physical contact.
- Avoid eye contact with others.
- The child does not respond when s/he is called by his name.
- A child with Autism prefers to be alone (isolation).
- Speech begins at a later age compared to other children.
- The repetition of phrases and words.
- Poor response and the use of signals.
- The use of incomprehensible words.
- Difficulty in using pronouns correctly (he, she, they).
- Repetitive movements such as running back and forth.
- It is hard to stay in one place for an extended period of time.
- Not interested in playing with other children.
- Self-harming and aggressive behaviour.

Observation Grid:

Observed Elements	Interpretations
Unusual Laughter.	This behaviour could be due to the lack of linguistic background, the child is not able to express his feelings and needs when he is bothered, happy or even scared, and also to attract more attention.
Girl (x) attaches to her classmate (y).	This behaviour is the result of the girl's insecurity in the absence of the safety

Chapter Two: Research Methodology and Data Analysis

	element, it would probably refer to the transfer of the basic element of safety from the mother or father to a close person in the classroom, such as a colleague.
Shouting and blocking the ears	According to the psychologist, this behaviour may refer to the refusal of accepting sounds coming from neighboring classes or due to the school environment noise.
The disappearance of the turning behaviour of the child in the classroom	The disappearance of the rotation behaviour is due to the child's ease of adapting to the classroom environment, another possibility is the child acceptance of the instructor's method of teaching
The child hyperactivity in the classroom	According to the psychologists, the main cause of this attitude, is the lack of the behavioural modification therapy programs, provided by specialists in individual sessions.
The child hits his head	This behaviour is the consequence of the child's inability to communicate and express himself verbally.
The child does not respond to the signs and words directed to him	This attitude is a result of not gaining attention, which leads to the absence of awareness (not adaptable in classroom).
The girl (x) 11years old, she uses English as a primary language at home with her family and at school	This girl acquired the English language rather than her native Arabic language from television and foreign educational programs.
Excessive and Exaggerated aggressiveness	According to the psychologists, the aggressive attitude of this child is due to the inappropriate instructions from his parents, who believe that violence against others is a means of self-defence.
The child's crying over things he wants, without mentioning them	In my opinion, this behaviour is an outcome of the child 's sensory difficulties, or the child's attachment to specific activities within the classroom.

Table 2.2. Observation Sample Checklist.

2.7. Conclusion

This chapter provides an illustration of the methodological part of our study, it gives a description of the tools used in collecting data involving questionnaire, semi-structured interview, and classroom observation, besides this, the chapter shows the analysis and interpretation of both questionnaire addressed to parents of ASD children, and the semi-structured interview designed for psychologists and speech therapists at the level of Alamal and Alwafaa institutions of children with Autism, the findings includes a set of information concerning autistic children and the characteristics that distinguish them from other peers, moreover, the challenges and difficulties that the psychologists face in treating children with Autism, along with the approved methods used in dealing with this disorder. From the obtained results, it is clearly noticed that there are some difficulties in terms of language, behaviour, social interaction and also education that autistic children face. Therefore, the last chapter of this study is assigned to the discussion of results, limitations of the study and some proposed recommendations.

**CHAPTER THREE: DISCUSSION AND
RECOMMENDATION**

Chapter Three: Discussion and Recommendation

3.1. Introduction

This chapter is devoted to the discussion of data that were collected from the pre-selected instruments. Credible and reliable information from the respondents were used to maintain the originality and the quality of the data collected. This chapter represents the discussion of the findings in relation to the interpretations and analysis of the collected data, as well as recommendations and some factors that impaired our study.

3.2. The Difficulties Faced by Psychologists and Speech Therapists

Many challenges were observed during this study regarding the education and the teaching process of children with Autism, as well as, the poor conditions that special needs education teachers face in treating children with Autism Spectrum Disorder.

- Lack of essential teaching materials.
- The national curriculum did not cater for the ASD learners effectively.
- Absence of training for psychologists in terms of diagnosis and taking care of children with Autism.
- Absence of societal awareness of Autism Spectrum Disorder and its common symptoms among children.
- The unavailability of a unified program adapted to the Algerian society (books, programs, assessment examinations, equipped classrooms.
- The distinctions of clinical schedule of symptoms, which leads to difficulties in teaching this category of children.
- Shortage of education establishments of children with ASD and poor early intervention in Algeria.

3.3. Parental Involvement in the Treatment Process of ASD Children

Despite the fact that there is no cure for Autism Spectrum Disorder until the present day; different methods and approaches of interventions are approved to be effective and

Chapter Three: Discussion and Recommendation

successful in the treatment process of such disorder since the 60s (Deisinger, 2011). Among the various programs that are used in treating Autism such as ABA, TEACCH, and LOVAS, parent involvement is widely recommended by the professionals, they agreed that it is crucial for the success of those programs, and their children's behavioural and educational level. Psychologists include parent involvement in the interventions of children with Autism as an important factor that takes an active role in the autistic child's success.

It is known that having a child with a developmental disability like Autism, lead parents to face much life challenges including stress and compression which negatively affect the child's outcomes; however, with the psychologists' help and guidance for parents in order to overcome these challenges, parents could be the major reason that contributes children's educational and behavioural abilities and their success in life.

Parental involvement is a significant strategy which helps autistic children developing their behaviours, their educational skills, and their social interactions, the psychologists and speech therapists agreed that parents have the big influence on their kids, because they spend the longest period of time with them, and they are the ones who know their children better and feel their needs, they mentioned that children whose parents are involved in the treatment, have better outcomes and exhibit positive feedback, since the parents' intervention is present.

An important point that was added by psychologists in the same institutions, is carelessness of some parents, they noticed that some parents of autistic children are less interested about their kids and do not care about their issues. It is important to follow the psychologist guidance concerning your child's benefits, the specialist know better what is good for your child and what is not, but unfortunately, there are some parents who do not make efforts with their children and do not cooperate with psychologists in promoting their behavioural and educational level. For instance, speech therapists and psychologists ask parents to read for their children at home, try to talk to them more, prevent them from

Chapter Two: Research Methodology and Data Analysis

watching television, and do not let them realize what they want all the time, this advice shows positive outcomes concerning the child's interaction with others and enhance their skills in learning and communicating; nevertheless, most of parents do not take this advice into consideration.

3.4. The Social Acceptance of ASD Children

Social stereotype in relation to children with autism was also identified in our study, it was discovered that some people within our society and even some parents of disabled children deny this category, according to the informants psychologists, there are some parents who do not accept the reality that s/he has a special needs kid and refuse the idea of helping his/her child through integrating him/her in special institutions, because he believes that no outcomes will reveal. Some people think that autistic children do not have the rights in all things that human beings have, education is one example of that. A special case was detected in the study, one parent who has 3 children, two of them are autistic and the youngest one is a normal girl, however, as a result of growing up in the same environment with her autistic siblings and playing with them all the time, she became autistic eventually. psychologists diagnosed it as an Acquired Autism, they said that this girl should be included within normal classes with normal peers in order to gain normal behaviours and attitudes like other non-disabled learners, but unfortunately, she was not accepted by any kindergarten due to some unfamiliar behaviours that she does.

From this view, we revealed that the acceptance of children with special needs is poor in our community, despite the fact that these children are human beings who deserve care and love just like others, however they are discriminated. More importantly, parents should be aware enough of the possibility for normal kids to be affected by autistic children, they would behave as such under all circumstances. It is often believed that disabled children have little contribution to society, their needs are not recognized, and their opportunity to learn, develop,

Chapter Two: Research Methodology and Data Analysis

and contribute to society, is decreasing because of this exclusion, they are disadvantaged from attending local school which is the main way of ensuring that all children are included in society (Bricker, 1995).

This discrimination has adverse effects on the intellectual functions, when the child has lower chances in watching, imitating, and interacting positively with peers, the development of higher social, cultural and psychological skills may be affected negatively. In addition, limited social participation may hinder language development, which leads to reduce the level of child's linguistic interaction since s/he has less opportunities to communicate. This lower level of language development completes the critical circle by restricting and therefore affecting social interaction (Vygotsky, 1978).

3.5. Parents-Special Needs Teachers Collaboration

Another important point that was mentioned by the psychologists and speech therapists which is the parents-teachers collaboration, all of them in both institutions appreciate the importance of collaborating with parents, for the necessity of gaining more information about the child which could help them in improving the behavioural and educational level. According to the psychologists and speech therapists of both institutions, parents are the source of strength and success for their children, they asserted that without cooperation of parents, they cannot achieve any positive results, because parents are the main and only factor that contribute their children's behavioural and educational level directly. Parents know their children better; they know their educational needs, their interests and what is good for them, therefore, they can plan for the future on behalf of their children (Webster & Roe, 1998). The findings showed that parents and special needs instructors have a good collaboration in both institutions, it was observed that they meet after the end of sessions or classes and discuss any updates regarding children.

Chapter Three: Discussion and Recommendation

3.6. Approved Approaches by Psychologists and Speech Therapists

Autism is regarded as one of the most severe and difficult developmental disorders due to its impact not only on the child, but also on the family and society. As a result of what this disorder imposes on the child from a hostile disorder that appears in the majority of developmental aspects (communication, social interaction and sensory perception), this hinders the processes of acquiring knowledge, developing capabilities, and interacting with others, therefore therapeutic intervention is very important because early diagnosis and the initiative to implement the treatment programs provide more opportunities for recovery and symptoms alleviation. The most effective treatment programs and widely used by psychologists and speech therapists are ABA, LOVAAS, and TEACCH.

The LOVAAS approach is a therapy for autistic children that is based on principles of Applied Behaviour Analysis, it is used to teach and promote suitable behaviour for children with Autism, including language use, social skills, communication and interaction with others. LOVAAS program includes different approaches, like EIBI, DTT, Home-Based Behavioural Intervention, including ABA, which are all interrelated and focus on developing the autistic child's linguistic skills, reducing difficult behaviours, and increasing social interactions.

Applied Behaviour Analysis (ABA), under LOVAAS approach, Ivar Lovaas developed ABA in 1987 which strongly emphasizes on early intervention. The ABA program's fundamental principles are based on repetitive, intense, and highly structured exercises with a weekly time commitment of 40 hours, in which the child is given a command and then rewarded each time he correctly responds (Axelrod, McElrath, Wine, 2012). The Applied Behaviour Analysis, is an intensive approach in which psychologists and parents collaborate to deliver the program that is divided into three phases:

- First year: the program aims to reduce the child's self-stimulation or aggressive behaviour.

Chapter Three: Discussion and Recommendation

- Second year: at this stage, the approach is more focused on expressive language and interactive play with his peers.
- Third year: the program shifts its focus to emotional expression in pre-academic tasks.

Another effective method approved by psychologists and speech therapists is the Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) home-based method (Burrell & Borrego, 2011), an educational approach for children with Autism and those who have communication issues, it was developed by Dr Eric Schopler, it is the first educational program specialized in teaching autistic children, it is a model approved by the American Autism Association. In addition to early intervention, TEACCH depends on the structure of the teaching system or the organization of the child's environment whether at home or elsewhere, as this method has proven to suit the autistic child and his world, one of the advantages of this program is that it examines each autistic child individually and develops special educational methods for each child based on his social, mental and linguistic abilities, using certain tests. TEACCH's educational curriculum focuses on teaching social adaptation, communication, self-reliance, and academic skills, it also provides diagnostic and assessment services for ASD children. TEACCH program places a strong emphasis on the educational process and the development of social skills within autistic children by making frequent use of visual stimulation.

3.7. Special Needs Teachers Proposal

Psychologists and speech therapists from both institutions agreed that they face many obstacles in teaching autistic children, they assured that these barriers are extremely hard to overcome; however, they try to do their best to find some solutions in order to improve children's school and behavioural skills.

In relation to the lack of instructional materials, all of special needs teachers explained how it is hard for them to teach children of such severe disorder with locally made teaching

Chapter Three: Discussion and Recommendation

materials, they clarified that poor teaching materials which are locally made do not motivate the learning process during classes, as they were much interested in the modern educational tools, they added that sometimes they find it hard to employ the approaches and programs with autistic children in developing their learning and behavioural skills due to the lack of teaching materials, while that may leads to a limited teaching process.

Developing effective educational programs that are helpful for disabled learners must involve psychologists and parents' collaboration. Specialists confirmed that they focus more on building a positive rapport with parents in order to create an appropriate and successful educational program, they emphasized the importance of combining parents' strengths and knowledge with instructors' experiences to best meet the needs of disabled learners. It is essential for parents to understand their children's disability and fight it in order to develop their children's competencies Furthermore, it is equally significant for special needs instructors to have a clear understanding of the difficulties that families meet when giving birth to an autistic child.

3.8. Limitations of the Study

Throughout this investigation, some factors were found to limit the study. We were faced by many obstacles and barriers, actually, we have faced resistance from the part of one institution, which did not allow us to attend the classes, on the other hand, not all parents were collaborative, there were some parents who did not accept to answer the questionnaire, the reason why, we have received only forty-nine (49) copies out of one hindered (100) distributed survey. In addition to the unavailability of resources.

3.9. Recommendations

The findings of the present study detect that the government should give more importance and priority to such special cases like learners with disabilities in general, and specifically pupils with Autism. Our study also reveals that collaboration between special

Chapter Three: Discussion and Recommendation

needs education teachers and parents of disabled children is very necessary if not obligatory for the well-being and the correct improvement of autistic children, because parents play the main and principal role in enhancing their children's behavioural and educational level besides specialists, however, the specialist cannot achieve any positive outcome without the proper participation of the parents. The following suggestions may be useful for improving the poor learning environment and the lack of the financial support and good quality institutions for learners with Autism.

- Increase opportunities for social interaction between ASD children and normal peers as much as possible in order to reduce their isolation.
- Provide specialists with an adequate training in the field of diagnosis and care of the child.
- Creating school committees to increase parental involvement.
- Providing special schools and institutions for the education of children with Autism.
- Raise awareness in order to encourage collaboration between parents and specialists.
- Promoting the inclusion strategy.
- The government should provide special institutions for children with Autism with the availability of teaching materials in order to help special needs educators perform their tasks better.

We suggest that the government should give more attention to this category of learners, because they have abilities that can exceed the capabilities of a non-disabled person.

3.10. Conclusion

In this part of our research, we discussed the most notable aspects in both institutions, we have endeavoured to gather as much information as possible regarding our research questions, the study revealed different challenges that ASD pose on psychologists and speech therapists, and how they try to overcome these difficulties, through the use of different approved

Chapter Three: Discussion and Recommendation

methods which help them treating such disorder; moreover, we have emphasized the role of parents and its importance when they are involved in the therapy process of children with Autism, as well as, we have mentioned the poor acceptance of ASD children in the society and its negative impact on them.

General Conclusion

This research paper is an attempt to discover and shed the light on an exceptional category of learners, it addresses Autism Spectrum Disorder as a disability that has an impact on children and their competencies in learning, we have chosen this disorder because it is classified as the most severe disability alongside Down Syndrome in our community. Autism is a neuro-developmental disorder that affects the child's educational and social skills, by this study, we have tried to explore this disorder symptoms, how it influences the children's learning abilities, the barriers that ASD causes on both teachers and learners, and how to overcome these obstacles, in addition to the approaches used by special needs instructors in the teaching process of autistic children.

It is important to remember that our study covered two special institutions of children with Autism, a total number of fourteen special needs teachers consist of psychologists and speech therapists, and sixty autistic children who are divided into different classes due to the disorder intensity of each child, besides forty-nine interviewed parents.

The findings have shown that, Autism Spectrum Disorder has a huge impact on children and their families, it causes deficits in learning unlike normal peers, this disorder minimizes the child's academic performance and social skills capabilities, s/he will be unable to interact and communicate with others, for the good of the child, once the spectrum is diagnosed, intervention is required.

Moreover, the study reveals that different approaches are used by special needs teachers in order to promote the autistic children's academic performance and behavioural skills, all of the psychologists and the speech therapists in both institutions adopt the LOVAAS, ABA, and TEACCH programs, these three methods which are based on improving the social and behavioural skills of children with Autism, besides developing their education process, are a therapy that aims at enhancing the child's learning, self-help, self-confidence, and

communication. Hence, the results obtained from the current investigation, support the mentioned hypothesis that LOVAAS, ABA and TEACCH treatment programs, are the most important and effective approaches approved by psychologists and speech therapists in order to reduce autistic children's disabilities.

Likewise, the investigation results also support the hypothesis that specialists and disabled children face various challenges that hinders their teaching/learning process, such as poor teaching materials, absence or lack of qualified special needs instructors in terms of diagnosis, teaching, the unavailability of suitable special education schools, lack of social awareness and parental support, as well as, the clinical schedule distinctions of symptoms that differ from one to another, which leads to difficulties in teaching this category of children.

The study reveals that collaboration between special needs education teachers and parents is necessary for the well-being of children with a disability. Additionally, the parental involvement in the treatment process is highly recommended for the reason that it has a positive outcome and a significant role in the autistic child's success, since parents could be a major pole that contributes to the child's academic and social development.

Based on the findings of this enquiry, it is recommended that the government should equip the institutions with sophisticated facilities and recruit qualified educators in the field, also it should provide an adequate training for specialists, furthermore, individuals as well as parents should be aware of this disorder and its seriousness. Finally, this investigation provides us with an insight that Autism Spectrum Disorder is a disability that could become a point of strength, if an appropriate intervention, at an early age, is provided.

List of References

- Adamowycz, R. (2008). Reforming education: Is inclusion in standardization possible? *Canadian Journal of Educational Administration and Policy*, 68.
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders, 4th edition*. Washington, D.C: American Psychiatric Press.
- Axelrod, S., McElrath, K. K., & Wine, B. (2012). Applied Behaviour Analysis: Autism and Beyond. *Behavioural Interventions*, 27 (1), 1–15.
- Bay, N. (2006). *Intelligent Design in Science, Religion and You BY Bay, Nickolas* (Author){Paperback}. Xlibris Corporation.
- Bell, A. P. (2008). The heart of the matter: Composing music with an adolescent with special needs. *International Journal of Education and the Arts*, 9 (9), 1-28.
- Best, J., & Khan J. (2006). *Research in Education*. New Jersey: Prentice Hall, Inc.
- Bricker, D. (1995). The Challenge of Inclusion. *Journal of Early Intervention*, 19 (3), 179-194.
- Burrell, T. L., & Borrego, J. (2012). Parents' Involvement in ASD Treatment: What Is Their Role? *Cognitive and Behavioural Practice*, 19 (3), 423-432.
- Byrne, M. (2001). Interviewing as a data collection method. *AORN Journal*, 74 (2), 233–235.
- Check J., Schutt R. K. (2012). *Research methods in education*. Thousand Oaks, Survey research. CA: Sage Publication, pp. 159- 185
- Denzin, N., & Lincoln, Y. (Eds.). (2005). *Handbook of qualitative research (3rd ed.)*. Thousand Oaks, CA: Sage.
- Godwin, P. E., and Anderson, L. M. (2005). *Understanding Sensory Dysfunction: Learning Development, and Sensory Dysfunction in Autism Spectrum Disorder*,

ADHD, Learning Disabilities and Bipolar Disorder. London: Jessica Kindersley Publishers.

- Goodnow, J. (1977). *Children's drawing*. London: Fontana Open Books.
- Gresham, F. (1988). Social competence and motivational characteristics of learning-disabled students: In Margaret C. Wing et al. (Eds) *Handbook of special education, research and practice*.:Pergamon press.
- Hallahan, D. P., & Mercer, C. D. (2002). Learning disabilities: Historical perspectives: In R. Bradley, L. Danielson, & D. P. Hallahan (Eds.), *Identification of learning disabilities: Research to practice*. Lawrence Erlbaum Associates Publishers.
- Hammill, D. D. (1990). On defining learning disabilities: An emerging consensus. *Journal of Learning Disabilities, 23*, 74-84.
- Hodgdon, L. A. (1995). *Visual strategies for improving communication*. Troy, MI: Quirk Roberts.
- Horne, P. E., Timmons, V., & Adamowycz, R. (2008). Identified Teacher Supports for Inclusive Practice. *Exceptionality Education International, 18* (3).
- Jahns, E. (2001). Introducing music to the hearing-impaired. *Teaching Music, 8* (6), 36-41.
- Kern, L. & Clemens, N. H. (2007). Antecedent strategies to promote appropriate classroom behaviour. *Psychology in the Schools 44* (1), 65-75.
- Kirk, S. A. (1962). *Educating Exceptional Children*. Boston: Houghton Mifflin.
- Lane, K. L., Pierson, M. R., & Givner, C. C. (2004). Teacher expectations of student behaviours: Which skills do elementary and secondary teachers deem necessary for success in the classroom? *Journal of Special Education, 38*, 174-186.
- Leavy, P., & Biber, H. (2011). *The Practice of Qualitative Research*. London: Sage Publications, Inc. 5th edition.

- Lerner, J. (2005). *Learning disabilities and related disorder: Characteristics and teaching strategies* (10th ed.). Independence, KY: Cengage Learning.
- Lewis, G. (1994). DSM-IV. Diagnostic and Statistical Manual of Mental Disorders, 4th edn. APA: Washington, DC. *Psychological Medicine*, 26 (3), 651–652.
- MacLean, J. (2008). The art of inclusion. *Canadian Review of Art in Education*. 35, 75-98.
- McGregor, G, & Vogelsberg, T. R. (1999). *Inclusive Schooling Practices: Pedagogical and Research Foundations: A Synthesis of the Literature That Informs Best Practice About Inclusive Schooling*. Paul H Brookes Pub Co.
- Michler, T. (1986). *Research Interviewing: Context and Narrative*. Cambridge. MA: Harvard University Press.
- National Advisory Committee on Handicapped Children. (1968). *Special Education for Handicapped Children (First Annual Report)*. Washington, DC: Department of Health, Education, & Welfare.
- National Joint Committee on Learning Disabilities. (1981). Learning disabilities: Issues on definition. Unpublished manuscript. (Available from The Orton Dyslexia Society, 724 York Road, Baltimore, MD21204. Reprinted in *Journal of learning Disabilities*, 20, 107-108.)
- Nickolas, B. (2006). *Essential of Change*. London: Thousand Oak.
- Parkinson, G., & Drislane, R. (2011) Qualitative research In Online dictionary of the social sciences. Retrieved from [http:// bitbucket. icaap. org / dict. pl](http://bitbucket.icaap.org/dict.pl).
- Patton, M. Q. (1999). *Grand Canyon Cekbration: AFather-SonJourny of Discovery*. Amherst, NY: Prometheus Books.
- Pennington, B. F. (1991). *Diagnosing Learning Disorders: A Neuropsychological Framework*. New York: Guilford.

- Peterson-Karlan, G., Hourcade, J. J., & Parette, P. (2008). A review of assistive technology and writing skills for students with physical and educational disabilities. *Physical Disabilities: Education and Related Services*, 26 (2), 13-32.
- Rao, S. (2003). Neuropsychological aspects of learning disabilities. In P. Karanth and J. Rozario (eds.), *Learning Disabilities in India: Willing the Mind to Learn* (pp.51-61). New Delhi: Sage Publications.
- Shore, S. (2002). The language of music: Working with children on the autism spectrum. *Journal of Education*, 183 (2), 97-109.
- Silver L.B. (1991). *Developmental learning disorders*. In M. Lewis (ed.), *Child and Adolescent Psychiatry* (pp.522-528). London: Williams and Wilkins.
- Silver, A.A., and Hagin, R. A. (2002). *Disorders of Learning in Childhood*. New York: John Wiley and Sons.
- Silver, L. B. (1996). *The role of the family in helping the child or adolescent with learning disabilities*. In, B.J. Cratty and R.L. Goldman, (eds.), *Learning Disabilities: Contemporary Viewpoints* (pp. 1-26). India: Harwood Academia Publishers.
- Stambaugh, L. (1996). Special learners with special abilities. *Music Educators Journal*, 83, 19-23.
- Thomas, C. (2004). How is disability understood? An examination of sociological approaches. *Disability & Society*, 19 (6), 569-83.
- U.S. Department of Education (2004). *Individuals with Disabilities Education Improvement Act of 2004*, Pub. L. No. 108-446 § 1400 et seq.
- Vygotsky, L. (1978). Review of *Mind in society: The development of higher psychological processes*. *American Journal of Orthopsychiatry*, 49 (3), 530-536.

- Waugh, R. F., & Riddoch, J. V. (2007). The effect of classical music on painting quality and classroom behaviour for students with severe intellectual disabilities in special schools. *International Journal of Special Education*, 22 (3), 2-13.
- Webster, A., & Roe, J. (1998). Children with Visual Impairments: Social interaction, language and learning. Routledge, London: *British Journal of Visual Impairment*, 16 (2), 82–83.

APPENDICES

Appendix 1

Parents' Questionnaire

Dear Parents,

We are honoured to choose you as respondents to this questionnaire, which is part of an educational research on Autism and Autistic children. We will be grateful if you can answer all questions by filling in the blanks in each question. We are pleased that you will be part of our research. Your answers, which remain anonymous, will contribute to the credibility of our research.

Thank you very much for your time and efforts

Part One

Gender:

Male

Female

Age:

.....

Occupation:

.....

Part Two

1) What is your child's first behaviour that has distracted your attention and made you suspect that there is a problem?

.....
.....
.....

2) At the present time, does your child respond when you call his name?

Yes

No

Sometimes

3) If you point at something in the room, does your child look at it?

Yes

No

4) How does your child ask for your help when s/he needs something? For example (points his/her finger to a toy that s/he cannot access).

Yes

No

5) Does your child respond to others and s/he is interested in playing with his/her peers?

Yes

No

Sometimes

Always

6) Does your child imitate what you do in front of him/her? For example (praying with you or waving goodbye).

Yes

No

Sometimes

Other suggestions:

.....
.....
.....

7) Is your child disturbed by the daily noise?

Yes

No

Sometimes

8) Does your child try to attract your attention with his/her behaviour?

Yes

No

If there are other specific attitudes, please mention them:

.....
.....
.....

09) Does your child perform strange behaviours and unusual body movements?

Yes

No

If yes, please mention them:

.....
.....
.....

10) How can you understand what your child wants? From gestures and body language, understandable language, or words?

.....

.....

.....

استبيان الأولياء

أعضاءي الأولياء،

يشرفنا اختياركم كمستجيبين لهذا الاستبيان الذي يعتبر جزء من بحث تعليمي حول التوحد والاطفال المصابين بالتوحد، سنكون جد ممتنين وشاكرين لكم إذا استطعتم الاجابة على جميع الأسئلة من خلال ملئ الفراغات بإعطاء المعلومات المناسبة فيما يتعلق بالسؤال. يسرنا ان تكونوا جزءا من بحثنا، اجاباتكم النزيهة والتي سنحرص بدورنا على ابقائها مجهولة الاسم، ستساهم في مصداقية بحثنا.

شكرا جزيلاً لكم على وقتكم ومجهوداتكم.

الجزء الأول

المعلومات شخصية:

- الجنس:

أنثى ذكر

- السن:

.....

- المهنة:

.....

الجزء الثاني

1- ما هو السلوك الذي قام به طفلك لأول مرة، صرف انتباهك لأول مرة وجعلك تشك أن هناك خلل؟

.....
.....
.....

2- في الوضع الحالي، هل يستجيب لك طفلك عند مناداته باسمه؟

نعم لا أحيانا

3- لو أشرت الى شيء ما في الغرفة، هل ينظر اليه طفلك؟

نعم لا

4- كيف يطلب طفلك المساعدة منك، عندما يكون بحاجة لشيء ما؟ مثلا (يشير الى لعبة لا يستطيع الوصول اليها)

نعم لا

اقتراحات اخرى:

.....
.....
.....

5- هل يتجاوب طفلك مع الاخرين ويهتم باللعب مع أقرانه من الأطفال؟

نعم لا أحيانا دائما

6- هل يحاول طفلك أن يقلد ما تفعله أمامه؟ مثلا (يحاول أن يصلي معك أو يلوح مع السلامة).

نعم لا أحيانا

اقتراحات أخرى:

.....
.....
.....

7- هل ينزعج طفلك من الضوضاء اليومية؟

نعم لا أحيانا

8- هل يحاول طفلك أن يلفت انتباهك بحركاته؟

نعم لا

ان كانت تصرفات خاصة رجاء أذكرها؟

.....
.....
.....

9- هل يؤدي طفلك حركات غريبة او غير اعتيادية؟

نعم لا

ان وجدت رجاء أذكرها؟

.....
.....
.....

10- كيف باستطاعتك فهم ما يريد ابنك؟ هل انطلقا من الاشارات؟ أم اللغة المفهومة؟ أم من الكلمات؟

.....
.....
.....

Appendix 2

Psychologists and Speech therapists' Interview

Semi-structured Interview Guided for Psychologists and Speech Therapists

Question 01: Before revealing that the child has an Autism Spectrum Disorder, how it can be diagnosed by the specialists?

Question 02: After confirming that the child has an ASD, how are the parents informed and made fully aware of this disorder? knowing that most people do not know what the concept "Autism" means.

Question 03: Does the presence of an autistic child affect another child from the same family? How do you interpret such an effect?

Question 04: What are the effective and approved methods and approaches used by specialists in the teaching process of autistic children in order to enhance their behavioural and educational skills?

Question 05: Does the autistic child face troubles in learning? If yes, how are these learning disabilities dealt with?

Question 06: What are the skills that children with autism mostly absorb?

Reading

Writing

Math

Question 07: Do you think autistic children have a language impairment and face linguistic communication problems?

Yes

No

Question 08: How could we develop the autistic child's linguistic skills?

Question 09: In your opinion, why Autism is observed among males more than females?

Question 10: As a psychologist, what do children with autism need the most?

Question 11: As psychologists, what are the obstacles and barriers that you face in treating Autism Spectrum Disorder?

مقابلة شبه منظمة موجهة لعلماء النفس ومعالجي النطق

السؤال الأول: قبل معرفة أن الطفل مصاب بالتوحد كيف يتم تشخيص المرض من قبل الأخصائيين؟

السؤال الثاني: بعد التأكد من إصابة الطفل بمرض التوحد، كيف يتم اعلام الوالدين وجعلهم على دراية تامة بهذه الظاهرة؟
علما أن معظم أفراد مجتمعنا ليست لديهم معرفة مسبقة بمفهوم التوحد.

السؤال الثالث: هل يؤثر وجود طفل مصاب بالتوحد على طفل اخر من نفس الأسرة، كيف تفسر مثل هذا التأثير؟

السؤال الرابع: ماهي الطرق المعتمدة والفعالة المعتمدة من قبل المختصين لتدريس أطفال التوحد وتطوير مستواهم السلوكي والتعليمي؟

السؤال الخامس: هل يواجه الطفل المصاب بالتوحد صعوبات في التعلم؟ إذا كانت الاجابة بنعم، كيف يتم التعامل مع صعوبات التعلم هذه؟

السؤال السادس: ماهي المهارات الاكثر استيعابا من طرف أطفال التوحد؟

القراءة الكتابة الحساب

السؤال السابع: هل تعتقد أن الأطفال المصابين بالتوحد يعانون من تلف في الناحية اللغوية، ويواجهون مشاكل في التواصل اللغوي؟

نعم لا أحيانا

السؤال الثامن: كيف يمكننا تطوير المهارات اللغوية للطفل المصاب بالتوحد؟

السؤال التاسع: في نظرك، لماذا يُلاحظ التوحد بين الذكور أكثر من الإناث؟

السؤال العاشر: كأخصائي نفسي، ما الذي يحتاجه الأطفال المصابون بالتوحد أكثر من غيرهم؟

السؤال الحادي عشر: كأخصائيين نفسانيين، ما هي العقبات والحواجز التي تواجهونها في علاج اضطراب طيف التوحد؟