

## Effectiveness of the proposed program in the acquisition of oral language in an autistic child

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### Abstract:

This study aims to find out the effectiveness of the proposed program in the acquisition of oral language in an autistic child. To achieve this study, a "case study" approach was used, where the sample amounted to 5 children with autism disorder, including 3 males and 2 females, aged 8-10 years. This sample was selected in an intentional way and this is in the interests of pediatric psychiatry at the hospital for mental diseases, where then collecting information about each case and then then applying the test "CARS to assess autism in childhood" and also the test "khumsi to evaluate oral language ELO".

The tests were applied individually, after which the program was applied within two and a half months at the rate of two servings per week for each case. The results of this research have resulted in:

There is an effectiveness of the proposed program for the development of lexical reception

The effectiveness of the proposed program exists for the development of lexical production and also in the repetition of words.

The proposed program is effective in developing the production of phrases and their repetition.

The proposed program is effective in the acquisition of oral language in an autistic child.

**Keywords:** Oral language, Autism.

### Introduction:

Language is a means of verbal communication, and it is a mental ability with which an individual communicates with others. Language includes a set of knowledge, vocabulary and rules that organize or control it. This language is generated in the individual's mind and enables him to produce and understand audible or written phrases and sentences. It is a means of

communication that helps a person, especially a child, to integrate into his society naturally, and also enables him to interact with others.

However, this ability is sometimes not achieved, and this is due to several reasons, including autism disorder, where this disorder affects various aspects of language and it is one of the puzzling diseases that still, its degrees vary from case to case, one of which is simple can be dealt with more easily than other other cases, as the child has the ability to train, especially if it is detected and trained at an early age .

There are several proposed therapeutic training programs to take care of autism from the linguistic side, such as the TEACH program and others, but the field of artephonia in Algeria has gone through these studies, which comply with the translation of these programs or adapt them .there are few studies that have dealt with the proposed training programs to help this category, and this is what prompted me to choose this topic and propose a program that helps acquire and develop oral language in an autistic child.

Although the cause of language problems in autistic children has not yet been discovered, but it is expected that the cause of these disorders is the occurrence of a set of problems before, during and after birth, which negatively affects brain development.communication disorders among autistic children differ from speech, while some others can talk with others about the topics they are interested in. (Hazem Radwan, 2011, P. 40 )

Language and communication problems are one of the main features of autism, and the problems of this category are communication, not language alone.verbal expression disorders in these cases are speech delay and lack of language development, and all these problems in communication vary from one child to another, due to the type and severity of the disorder in the child on the one hand and on the other hand to the extent of rehabilitation and treatment of the child to help him get rid of or alleviate these problems.

There are many attempts and therapeutic interventions offered to children with autism, and these attempts include many behavioral, developmental and cognitive behavioral interventions, and although each program is based on a different approach and uses unique strategies, there is a significant overlap in the components of these programs.

Due to the lack of training programs that help train an autistic child to express, recognize and develop receptive and expressive language skills, there are studies that have focused on this aspect, including the study "Soleimani Leila 2021", which aimed to find out the effectiveness of a training program for the development of communication skills for autistic children, and the results confirmed that there are statistically significant differences in the development of verbal and non-verbal communication skills in favor of this category.

And also the study of " Dr.Maryam Isa 2016 " to verify the effectiveness of a training program in the development of verbal expression skills in autistic children and the results revealed the effectiveness of this program in the development of verbal communication skills.

As confirmed by the study of " Dr. Rashid Hamid and Dr. 2019 " to ensure the effectiveness of a therapeutic training program in the development of social and communication skills in autistic children in middle childhood, and the study confirms that this program has a major role in the development of social and communication skills in children with autism disorder.

From which we pose the following problem: is the proposed program effective in the acquisition of oral language in an autistic child ?

### **Objectives of the study :**

Identify the effectiveness of the proposed program in oral language acquisition in children with autism disorder .

The development of oral language in an autistic child .

Enrich the Algerian clinical environment with new programs that help in the development of oral language .

### **The importance of studying :**

Helping autistic children from a communicative-linguistic point of view .

Contribute to avoiding the shortage of therapeutic programs that contribute to the development and acquisition of oral language in autistic children .

### **Procedurally defining concepts :**

**Autism** : a behavioral developmental disorder that appears during the first three years of a child's life, which is characterized by a clear impairment in social interaction and verbal communication skills and the appearance of unusual stereotypical movements and behaviors, is every child diagnosed as autistic based on the autism criteria in the Diagnostic and Statistical Manual of Mental Disorders DSM 5 and the severity of his autism was determined using the CARS childhood autism assessment scale .

**Therapeutic program:** it is the methods followed by specialists with troubled children in order to overcome their difficulties, and it is a set of steps used and applied in working with autistic children in the form of a set of classes.

**Language:** it is a system of reformed sounds, governed by rules related to the processes of production of symbols and sounds by the speaker and the processes of their reception and translation into semantics by the listener, whether these symbols are phonetic or non-phonetic used by members of society to communicate and interact among themselves.

### **Study limits :**

**Human boundaries:** the study sample includes a group of children with autism spectrum disorder .

**Time limits :** this study was determined from December 2023 to April 2024 .

**Spatial boundaries:** this study was conducted at the hospital institution for mental diseases in the Department of pediatric neuropsychiatry, in the state of Sidi Bel Abbas.

### 3) Sample study:

The selection of the research sample was done in an intentional way, this is in order to answer the questions of the study where all the children who did not match the sample were excluded.

-The sample of the study consisted of 5 cases with autism disorder of both sexes and the group of children was selected according to the following criteria:

**Gender:** the study did not specialize in a specific gender, so it contained individuals of both sexes.

**Age:** between the ages of 8 and 10 years, and we have set this age at the time of application because the test is applied to this age group.

Gender	Iterations	Percentage ratio
Male	03	60%
Female	02	40%
Total	05	100%

**Table I: Distribution of sample members by gender**

We can see from the relative circle that 60 per cent of the study sample are male and 40 per cent are female.

### **Methodology of the study:**

The methodology is defined as the way in which the researcher approaches the issue in order to discover the truth. The choice of the appropriate method depends on the nature of the issue being addressed.

Since the nature of my research deals with studying the effectiveness of a proposed programme on oral language acquisition for children with autism, I relied on a case study approach, which is a method of collecting information using different methods and aims to diagnose problems, identify their nature and causes, and plan the necessary therapeutic services.

### **Study tools:**

The CARS (Childhood Autism Rating Scale) and the ELO (Oral Language Assessment Test) were applied as adapted to the Algerian environment.

☐ **Presenting and analysing the results of the cases:**

- **Before applying the programme:**

☐ **View the results of the CARS test to estimate childhood autism**

Cases	Result
The first case	37.5%
The second case	39.5%
The third case	35.5%
The fourth case	33%
The fifth case	39.5%

**Table 02: Representing the results of the CARS test for childhood autism.**

**Analysing the results of the CARS test for childhood autism:**

The first case scored 37.5 per cent, the second case scored 39.5 per cent, the third case scored 35.5 per cent, the fourth case scored 33 per cent, and the fifth case scored 39.5 per cent.

Therefore, according to the CARS scale, the study sample suffers from mild autism.

**View ELO test results for the first case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
08	12	08	04	0	02
40%	28.5%	25%	29%	0%	13.3%

**Table 03 :Represents the results of the first case test before the implementation of the programme**

**Analysing the results of the first case:**

According to the results obtained in the table above, the first case in lexical reception answered 8 items out of 20, estimated at 40 per cent; in lexical production, she answered 12 items out of 42, estimated at 28.5 per cent; in word repetition, the case answered 8 items out of 32, estimated at 25 per cent; and in comprehension, the case answered 4 items out of 21, estimated at 19 per cent

In comprehension, the case answered 4 items out of 21, i.e. 19%, while in phrase production, the child did not answer any item, which is estimated at 0%, and finally the case obtained 2 items out of 15 items, i.e. 13.3%.

According to the results obtained, we note that the case was able to identify almost half of the pictures in the lexical reception, the table, and in the lexical production, the percentage was rather low, as he could not recognise the pictures and events due to lack of concentration, and in word repetition, the percentage was also very low, and the case (M-A) could not repeat the words well. In verbal comprehension, the percentage was also low and he could not understand and recognise the pictures presented to him due to lack of mental abilities, in the production of phrases, the percentage was zero due to the lack or weakness of the child's linguistic stock, and in the aspect of language repetition, the result was very low.

**View ELO test results for the second case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
09	11	09	13	5	04
45%	26.6%	28.1%	40.6%	20%	26.6%

**Table 04 : Represents the results of the second case test before applying the programme**

**Analysing the results of the second case:**

According to the results obtained in the table above, the first case answered 9 items out of 20, estimated at 45%, while in lexical production, she answered 11 items out of 42, estimated at 26.6%, and 9 items out of 32, estimated at 28.1%, and this is in the repetition of words.

In comprehension, the case answered 13 items out of 21 (40.3%), while in phrase production, the child answered 5 items out of 25 (20%), and finally the case obtained 4 items out of 15 (26.6%) in phrase repetition.

According to the results obtained, the second case was able to recognise almost half of the pictures in lexical reception, the result was good, but in lexical production, the result was below average and the case could not recognise all the pictures due to poor attention, and in the aspect of word repetition In oral comprehension, the result was somewhat satisfactory, but in phrase production, the result was poor due to poor language acquisition, which is almost the same as the result obtained in phrase repetition, which is very poor.

**View ELO test results for the Third case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
08	13	05	22	2	05
40%	30.9%	15.6%	68.7%	08%	33.33%

**Table 05: Representing the test results of the third case before applying the programme**

**Analysing the results of the third case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 8 items out of 20, estimated at 40%, while in lexical production, she answered 13 items out of 42, estimated at 30.9%, and 5 items out of 32, estimated at 15.6%, and this is in the repetition of words.

In comprehension, the case answered 22 items out of 32 (68.7%), while in phrase production, the child answered 2 items out of 25 (8%), and finally the case obtained 5 items out of 15 (33.33%) in phrase repetition.

According to the results obtained, we note that the case was able to identify almost half of the images in lexical reception, and in lexical production, the result was rather low so that he could not recognise images and events due to lack of concentration, and in word repetition, the percentage was also very low and the case could not repeat words well except for some of them due to the language disorders suffered by the case.

In the aspect of comprehension, the percentage was good and he was able to recognise most of the pictures presented to him, in the aspect of producing phrases, the percentage was low and the case could not complete the sentences due to poor concentration and attention, and in the aspect of repeating phrases, we also note the low percentage, which is also due to distracted attention and lack of concentration.

**View the results of the ELO test for the fourth case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
05	113	04	7	0	03
25%	30.9%	12.5%	21.7%	0%	20%

**Table 06: Test results for the fourth case before applying the programme**

**Analysing the results of the fourth case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 5 items out of 20, estimated at 25%, while in lexical production, she answered 13 items out of 42, estimated at 30.9%, and 4 items out of 32, estimated at 12.5%, and this is in the repetition of words.

In comprehension, the case answered 7 items out of 32 (21.7%), while in phrase production, the child did not answer any item (0%), and finally, the case obtained 3 items out of 15 items (20%) in the repetition of phrases.

According to the results obtained, we note that the case was able to identify almost half of the pictures in lexical reception, but in lexical production, the percentage was rather low as he could not recognise pictures and events due to lack of concentration, and in word repetition, the percentage was also very low and the case (M-A) could not repeat words well. In verbal comprehension, the percentage was also low and he could not understand and recognise the pictures presented to him due to a lack of mental abilities, and in the production of phrases, the percentage was zero due to the lack or weakness of the child's linguistic stock, and in the aspect of language repetition, the result was very low.

**View ELO test results for the fifth case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
07	12	05	10	03	04
35%	26.1%	15.6%	31.25%	12%	26.6%

**Table 07: Representing the results of the fifth case before the application of the programme**

**Analysing the results of the fifth case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 7 items out of 20 (35%), in lexical production, the case answered 12 items out of 42 (26.1%), and in word repetition, the case answered 5 items out of 32 (15.6%).

In comprehension, the child answered 10 items out of 32, or 31.25 per cent, while in phrase production, the child answered 3 items out of 25, or 12 per cent, and finally, in phrase repetition, the child answered 4 items out of 15, or 26.6 per cent.

From the results obtained, it was found that the case was able to recognise almost half of the pictures in lexical reception, so the result was good, but in lexical production the result was below average and the case could not recognise all the pictures due to poor attention, and in the aspect of word repetition, the percentage was weak and she could not repeat most of the words presented to her, so she is very weak.

In verbal comprehension, the percentage was also low and he could not understand and recognise the pictures presented to him due to a lack of mental abilities, and in the production of phrases, the percentage was very low due to the child's poor linguistic stock, and in the aspect of linguistic repetition, the result was very low.

### **Proposed oral language acquisition programme for children with autism:**

#### **Definition of the programme:**

It is a specific plan that includes a set of activities, exercises, situations and integrated experiences, with the aim of improving, developing and raising the level of language and its development in children with autism.

We proposed the Arvonian training programme to find out its effectiveness in the acquisition of oral language in autistic children with a low degree of autism.

#### **Objectives of the training programme:**

- This programme aims to assist in the cognitive management of children with mild autism.
- Trying to develop and improve the language level of autistic children.
- Managing the cases from the aspect of linguistic production.
- The programme aims to increase the child's linguistic competence that he/she receives from following the content of the programme for communication.
- Addressing the linguistic levels, through which language production and achievement takes place.

#### **The importance of the programme:**

The importance of the proposed programme is :

- Developing the oral language of the autistic child to a minor degree.
- Developing the autistic child's ability to communicate with family and peers.

#### **Tools of the programme:**

The proposed pronunciation programme has tools that complement it and enhance its training situations, namely:

- Mirror
- A table
- A chair
- Cards related to the letters of the alphabet with short and long movements and words containing these letters in the beginning, middle and end.
- Pictures related to the words mentioned in the programme

- In addition to the availability of some games to excite the autistic child and interact with the programme.

**-Results of the ELO Oral Language Assessment Test after the implementation of the programme**

**☐ Results of the ELO post-test for the first case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
09	11	11	10	04	05
45%	28%	34.3%	31.2%	16%	33.3%

**Table 08: Representing the results of the first case after applying the programme**

**Analysing the results of the first case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 9 items out of 20 (45%); in lexical production, the case answered 14 items out of 42 (28%); in word repetition, the case answered 11 items out of 32 (34.3%); and in comprehension, the case answered 10 items out of 32 (31.25%).

In comprehension, the child answered 10 items out of 32, or 31.25 per cent, while in phrase production, the child answered 4 items out of 25, or 16 per cent, and finally the case obtained 5 items out of 15, or 33.3 per cent.

From the results obtained, it was found that the case was able to recognise almost half of the pictures in lexical reception, the result was good and close to average, but in lexical production the result was below average and the case could not recognise all the pictures, and in word repetition the percentage was close to average, but she could not repeat most of the words presented to her.

In oral comprehension, the percentage was good, but he could not understand and recognise the pictures presented to him due to a lack of mental abilities, and in the production of phrases, the percentage was very low due to the child's poor linguistic stock, but in the aspect of language repetition, the result was generally satisfactory.

**☐ Results of the ELO post-test for the second case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
09	20	11	16	06	06
45%	40%	34.3%	50%	24%	40%

**Table 09: Representing the results of the second case after applying the programme**

**Analysing the results of the second case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 9 items out of 20, estimated at 45%; in lexical production, the case answered 20 items out of 42, estimated at 40%; in word repetition, the case answered 11 items out of 32, estimated at 34.3%; in comprehension, the case answered 16 items out of 32, estimated at 50%; and in reading comprehension, the case answered 11 items out of 32, estimated at 34.3%.

In comprehension, the case answered 16 items out of 32, or 50 per cent, while in phrase production, the child answered 6 items out of 25, or 24 per cent, and finally, the case obtained 6 items out of 15, or 40 per cent, in phrase repetition.

From the results obtained, it was found that the case was able to recognise almost half of the pictures in lexical reception, the result was good and close to average, but in lexical production, the result was below average and the case was not able to recognise all the pictures, and in word repetition, the percentage was close to average, but she could not repeat most of the words presented to her due to attention deficit.

In oral comprehension, the percentage was good and within the average number of answers, in phrase production, the percentage was very low due to the child's poor linguistic repertoire, and in the aspect of language repetition, the result was good.

**Results of the ELO post-test for the third case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
09	21	8	14	5	08
45%	42%	25%	43.7%	20%	53.3%

**Table 10: Representing the results of the third case after applying the programme**

**Analysing the results of the third case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 9 items out of 20, estimated at 45%; in lexical production, the case answered 21 items out of 42, estimated at 42%; in word repetition, the case answered 8 items out of 32, estimated at 25%; and in comprehension, the case answered 14 items out of 32, estimated at 43.7%.

In comprehension, the case answered 14 items out of 32, or 43.7%, while in phrase production, the child answered 5 items out of 25 items, or 20%, and finally, the case obtained 8 items out of 15 items, or 53.3%.

According to the results obtained, it was found that the case was able to recognise less than half of the pictures in lexical reception, the result was good and close to average, in lexical production the result was below average and the case could not recognise all the pictures, in word repetition the percentage was poor and she could not repeat most of the words presented to her due to attention deficit

In oral comprehension, the percentage was close to the average, in phrase production, the percentage was very low due to the child's poor linguistic repertoire, and in the aspect of language repetition, the result was good and above average.

**Results of the ELO post-test for the fourth case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
10	21	10	10	06	06
45%	42%	31.2%	31.2%	24%	40%

**Table 11: The results of the fourth case after applying the programme**

**Analysing the results of the fourth case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 10 items out of 20, estimated at 50%; in lexical production, the case answered 21 items out of 42, estimated at 42%; in word repetition, the case answered 10 items out of 32, estimated at 31.2%; and in comprehension, the case answered 10 items out of 32, estimated at 31.2%.

In comprehension, the child answered 10 items out of 32, or 31.2 per cent, while in phrase production, the child answered 6 items out of 25 items, or 24 per cent, and finally, in repetition of phrases, the case obtained 6 items out of 15 items, or 40 per cent

From the results obtained, it was found that the case was able to recognise half of the pictures in lexical reception, the result was good and within the average, in lexical production it was good and close to the average, but the case could not recognise all the pictures, and in word repetition the percentage was poor and she could not repeat most of the words presented to her due to lack of attention and concentration.

In oral comprehension, the percentage was poor, in phrase production, the percentage was very low due to the child's poor lexical repertoire, and in the aspect of language repetition, the result was good and close to average.

**Results of the ELO post-test for the fifth case:**

Lexical Reception	Lexical Production	Word Repetition	Comprehension	Phrase Production	Phrase Repetition
09	19	10	14	04	06
45%	38%	31.2%	43.7%	16%	40%

**Table 12: Representing the results of the fifth case after the implementation of the programme**

**Analysing the results of the fifth case:**

Through the results shown in the table above, the case obtained the following results:

In lexical reception, the case answered 9 items out of 20 (45%); in lexical production, the case answered 19 items out of 42 (38%); in word repetition, the case answered 10 items out of 32 (31.2%)

In comprehension, the case answered 14 items out of 32, or 43.7%, while in phrase production, the child answered 4 items out of 25, or 16%, and finally, in phrase repetition, the case obtained 6 items out of 15, or 40%.

According to the results obtained, it was found that the case was able to recognise about half of the pictures in lexical reception, the result was average, while in lexical production it was good and close to average, and in the aspect of word repetition, the percentage was weak and she could not repeat most of the words presented to her due to lack of attention and concentration.

In oral comprehension, the score was average, in phrase production, the score was very low due to the child's poor lexical repertoire, and in the aspect of repetition, the score was good and close to average.

### **Interpretation and discussion of the results:**

The results of the study obtained through field and applied research revealed that the proposed training programme is effective in developing the linguistic level of autistic children, and this shows that the language of the sample improved and developed after the pre- and post-treatment of the study.

This is due to the effective development of the oral language at all levels, as there was an effective harmony between the training exercises and the study sample, and this increased the number of correct answers due to the availability of the proposed training programme on the various basic stages of oral language development.

### **General conclusion :**

The results obtained when applying the proposed programme for oral language acquisition in autistic children confirmed that there is a clear improvement in the linguistic level of children, compared to their previous level, which is shown in Tables No. (3/4/5/6/7), and this allows us to accept the proposed hypothesis, which states that the proposed programme is effective in the acquisition of oral language in autistic children, and this is due to the proposed stages in the programme, which are represented in :

- Sensorimotor exercises.
- Repetition (pronunciation of letters / pronunciation of letters with movements)
- Designation
- Naming

When we applied these stages, it turned out that most of the cases were not able to do the latter easily, and this shows that autism disorder affects language and its development, and after several attempts of exercises in the stages of the proposed programme, most of the cases were able to raise the language level compared to their post-test level, which is discussed in Tables No. (8/9/10/11/12), and this indicates that the hypothesis is achieved, and there is an improvement and development in the language level compared between the pre-test and the results of the post-test.

It is clear from the above, and after presenting and analysing the results of the sample of 5 cases and discussing the hypothesis under the case study approach, it can be concluded through this limited study in time and space and in the number of cases studied that the hypothesis has been verified.

Therefore, we can rely on this proposed archival training programme as its phases have shown positive results.

**List of references:**

1. Dr Nayef bin Abed Al-Zaree. Introduction to Autism Disorder Basic Concepts and Intervention Methods Dar Al-Fikr 2014.
2. Dr . Osama Farouk Mustafa. Mr Kamal El-Sherbini. Autism Causes, Diagnosis, Treatment, Al Masirah Publishing House 2011
3. Dr Ibrahim Abdullah Faraj Zureikat . Autism Characteristics and Treatment, Wael Printing House, 2004.
4. Wafaa Ali Al-Shami. Features of autism, its development and how to deal with it, Fahd National Library, 2004.
5. Ahmed Amin Nasr Soha 2002: Linguistic communication for the autistic child, Dar Al-Fikr, Jordan.
6. Mohamed Sayed Moussa 2007: Autism Disorder. Anglo Egyptian Library. Cairo
7. Othman Labib Farraj 1996. The psychology of autism rumination. The periodical bulletin of the Union of Organisations for the Care of Special Groups and Disabled Persons. Issue 46. Cairo
8. Osama Farouk Mustafa, Al-Sayed Kamel Al-Sherbini, Autism "Causes, Diagnosis and Treatment", Amman, Dar Al-Masirah for Publishing, Distribution and Printing, second edition, 2011
9. Hisham El Kholy. Autism, Faculty of Education. Benha University, Egypt, 2007.
10. Ahmed Nayel Al Ghurair and Bilal Awad. Psychology of Autistic Children. Dar Al-Shorouk for Publishing and Distribution Jordan, 1st edition, 2009.
11. Saeed Al Hassani Al Azza. Special education for children with special needs and children with behavioural disorders. Jordan, 1st edition. 2002
12. Al-Jalamdeh, Fawzia bint Abdullah / Measurement and diagnosis of autism spectrum disorders in light of the diagnostic criteria contained in the dsm4/dsm5, first edition, Dar Al-Masirah. Amman Jordan 2015
13. - Ibn Jinni Abu al-Fath Othman (d. 1002 AD): Characteristics, ed: Muhammad Ali al-Najjar, Dar al-Kutub al-Misriya, Cairo, Egypt, C1
14. Ibn Manzoor Abu al-Fadl Muhammad bin Makram bin Ali (d. 1311 AD): The Language of the Arabs, Article (L.G.O.), Dar Sadr, Beirut, Lebanon, Volume 15.

15. Al-Sharqawi Mahmoud Abdul Rahman Issa / Autism and its means of treatment / Volume 1 / Dar Al-Alam & Al-Iman for publishing and distribution 2018.
16. Yamina Ghalem / Linguistic and non-linguistic communication for the autistic child / Academic Book Centre 2017
17. Rafika Ben Messia / Lectures on the scale of levels of linguistic analysis / Montouri Brothers University Constantine 1 Issue 15 / 2021-2022
18. Linguistic Analysis in the Light of Semantics, Mahmoud Okasha, Publishing House for Universities, Egypt, 1, 1426 AH 2011
19. Abdelrazak Taleb / Master's thesis entitled Evaluation of oral language retrieval in Habsi Broca / Larbi Benmehidi University Oum El Bouaghi / 2021-2020
20. Fahad Khalil Zayed / Semantic and lexical level / Dar Al-Safwa / Amman, 1st edition, 2011.
21. Saidoun Mahjouba / Baghdadi Ben Attia Ismail / Graduate thesis entitled The role of foster care in the development of oral comprehension and language production in autistic children at the University of Mostaganem / Year 2018-2019
22. Nada Saud Abdulaziz Al-Dayel Lecture / College of Applied Studies and Community Service / King Saud University 1957-2023
23. Shenafi Abdelmalek. Studying and analysing the context of access to the mental lexicon during oral language production in the Disavisi child through the works test. University of Bouzarea 2010
24. Al-Atoum, Adnan Youssef, Cognitive Psychology Theory and Practice, 1st edition, Amman, Dar Al-Masirah for Publishing, Distribution and Printing, 2010.
25. Mohammed Farhan Al-Qudah et al. 2010 Developing language skills and reading readiness in kindergarten children, Vol. 1, Dar Al-Thaqafa Publishing House. Amman.
26. Qathan Ahmed Al-Zaher / Language and Speech Disorders, 1st Edition, Wael Publishing House, 2010.
27. Houla Mohammed / Arfonia, the science of language, speech and voice disorders / Homa Publishing House, Algeria, 2012.

**Scientific magazines:**

1. Wafaa Ali Al-Shami . Features of autism, its development and how to deal with it. Fahd National Library, 2004.

2. Shirin Al-Badrawi Abdel Tawab Al-Saeed. Scientific Journal of the College of Kindergarten. Volume Four Issue Two October 2018
3. Dr . Jamal Belbakkai and Dr Donia Faraha 2021 Autism disorder from a biological and neurological perspective. Daa Journal of Psychological and Educational Research Volume 1 Issue 2
4. Mohammed Mikati and Rana Al-Kurdi. The comprehensive rehabilitation team for the autistic child. The Lebanese Association for Studies and Research for the Disabled, 2002.
5. Nahid Mahmoud Mohammed Abu Al-Nasr / The effectiveness of a programme based on Montessori activities to develop social communication skills in children with PDD/ NOS / Scientific Journal of the Faculty of Early Childhood Education at Mansoura University / Volume VIII Issue IV / April 2022.
6. Dr . Khashab Souad / Diagnosis of autism between the fourth edition DSM 4 TR .2000 and the fifth edition DSM 5 APA 2013.
7. Dr Alia Bibia / Levels of linguistic analysis and their impact on the detection of textual norms / University of Tebessa- Algeria.

**Foreign language références :**

1. Marshall, V. :Living with Autism London: A Sheldon Press Book, -2004
2. Heward, W.:Exceptional Children:An Introduction to specia education USA Upper Sanddle River: Memill & Prentice Hall, 2006
3. Dubois J 1990 dictionnaire de la linguistique

**Websites:**

1. <https://www.msdmanuals.com>