

## Speech Delay and Disorders among Children at the "ORL" Center, Batna, Algeria

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### Abstract

The ability to communicate is something that is taken for granted; however, some children have serious difficulties in developing their speech and language, which in turns can affect their ability to express themselves, and develop relationship with others. There are different types of speech and language impairments (disorders). This paper focuses on identifying the most common speech disabilities among children, the main reasons behind them, and the possible treatment of such impairments. Furthermore, to establish a deep understanding of the important regions in the human brain involved in normal speech production. The aim of this study is to investigate speech delay from different angles and its relationship with neurodevelopment. The study deals with children aged 3–5 years old, who are patients in the ORL center, Batna city. Besides, their parents and numerous speech therapists that treat the toddlers. To accomplish such aims, we opted the descriptive design and reliable instruments such as questionnaire, interview, and observation. The key findings of the study show that speech delay does not have a specific cause or an immediate treatment such as medicines, but treatment is based on practicing some exercises that are given to the toddlers to work on with their parents' contributions.

### ملخص

تعتبر قدرتنا على عملية التواصل أمرا مفروغا منه، غير أن بعض الأطفال يجدون صعوبة في وضع الكلام واللغة مما يمكنه أن يؤثر على قدرتهم على التعبير عن أنفسهم، وتطوير علاقتهم مع الآخرين. هناك أنواع مختلفة من العاهات (اضطرابات) في الكلام واللغة. هذا البحث يركز على تحديد إعاقات الكلام الأكثر شيوعا بين الأطفال، والسبب الرئيسي وراءها والعلاج الممكن لهذه العاهات وعلاوة على ذلك،التوصل إلى فهم مشترك للمناطق المهمة في الدماغ البشري والتي تشترك في إنتاج الكلام العادي و هذا يزودنا بالإطار الضروري الذي يتم من خلاله تفسير اضطرابات الكلام، والهدف من هذه الدراسة تحليل اضطرابات الكلام من زوايا مختلفة وعلاقتها مع النمو العصبي والبيولوجي وعوامل أخرى. واعتمدنا فيه على الوصف وتفسير النتائج المحصل عليها من الاستبيان المقدم والمقابلة. تناولت الدراسة فئة الأطفال الذين تتراوح أعمارهم بين 3-5 سنوات والذين ينتمون إلى مركز "انف حجرة أذن" لولاية باتنة. إلى جانب آبائهم والعديد من معالجي الكلام (النطق) الذين يعالجون الصغار. النتائج الرئيسية للدراسة تظهر انه لا يوجد سبب معين لاضطرابات الكلام و ليس لديها علاج فوري مثل الأدوية وإنما يعتمد علاجها على ممارسة بعض التمارين التي يتدرب عليها للأطفال.

### الكلمات المفتاحية:

تأخر الكلام، اضطراب الكلام، زلات اللسان، تأتأة، اللغة، الكلام، فقدان القدرة الكلام .

**Keywords:** Speech Delay, Speech Disorders, Slips of the Tongue, Stammering, language, Speech, Aphasia

## Introduction

Communication skills are of great importance among members of any society. Speech and language development are primary elements of communication. Thus, interrupting such a process will create a serious problem especially during the childhood period. This speech disabilities that may face children will create an obstacle in their language acquisition/learning. Each child face some trouble when acquiring a language, but what if they are not just troubles ? There are many kinds of speech and language disorders that can affect children.

Before being a mean of communication (social need), language is at first place a personal need to express one's thoughts , ideas and emotions. It is obvious that speech is a certain way which makes us understandable. The ability to speak, to understand speech and to acquire languages requires a big amount of brain resources to manage these operations .The complex brain structure which is responsible of that operations is called the brain's linguistic system which allows human to talk, to understand speech , to write and to read. Furthermore, it gives us the power to acquire new knowledge and abilities.

## Literature Review

The terms speech and language are sometimes used as synonyms. However, from a linguistic point of view, they are different sides of the same coin: Language refers to the rules of sound's combination into words and sentences and the meaning behind them.

Speech refers to the articulated utterances and the ability to perform them. Children develop speech and language in a relatively short period of life. In most of them, language acquisition is smooth and effortless. However, some children experience a delay and some serious difficulties in achieving their native language or certain aspects of it. Speech disorders are fairly common in children. Many of them show delays in developing speech; a condition that frequently is out-grown. Speech disorders arise due to many factors : neurobiological , psychological, and/or social levels.

Children vary in their development of speech and language skills. However, they follow a natural progression or timetable for mastering the skills of language. The first three years of life, when the brain is developing and maturing is the most intensive period for acquiring speech and language skills. There appear the *critical period* for speech in infants and young children when the brain is best able to absorb language. If this critical period is allowed to pass without exposure to language, It will be more difficult to learn.

Language impairments, at *the biological level (dysphasia)*, are less serious and the easiest problem to treat ; mostly they are the *articulation disorders* or "*speech disorders*" ; errors in the movements of the mouth and tongue...which are used to produce phonemes often involve consonants; chief among them: *Lisping*. which is an example of speech (articulation) disorder. Articulation is the process when sounds, syllables, and words are formed. The tongue, jaw, lips, teeth, and palate adjust the air stream coming from the vocal folds (Leung 1999).

There many types of sounds errors but most of the mistakes fall into one of the three categories : omissions, substitutions, or distortions. A child may leave sounds out of words, such as "nana" for "banana" this is what is called omission. A substitution is when young children sound like they are making a "w" sound for an "r" sound e.g., "wabbit" for "rabbit". And distortion is when a child tries to make the right sound, but cannot produce it clearly for example using "th" for "s" and saying "thun" for "sun" (Yule, 2010). Hence, a phonological

treatment process is required for the articulation problems. The patient should focus on the sound primarily by listening and after correct pronunciation is produced he or she should remember what the particular sound feel like when it is being created in the mouth. The correct practice with the speech therapist is more important than the number of executed attempts (Škodová, 2003).

Furthermore, *stuttering (stammering)*, which is used in Great Britain, while stuttering used in USA. Stuttering is a disruption in the fluency of verbal expression characterized by involuntary, audible or silent, repetitions or prolongations of sounds or syllables. These are not readily controllable and may be accompanied by other movements and by emotions of negative nature such as fear, embarrassment, or irritation (Wingate, 1964; Leung, 1999).

People who stutter demonstrate tension in the tongue, the lips and in the throat when speaking. This results in the blocking and repetition of syllables, whole words and phrases, as well as overuse of filler words such as « um » or « like ». Stuttering refers to more than one kind of vocal production. There are three identifiable types: Repetition, Prolongation, Block,

A speech and language usually treats stammering during a course of speech and language therapy sessions. Treatment often focuses on having children produce fluent speech as they learn to self-monitor. This can be done by first having the child say single words in a slow, relaxed way. The number of words the child says may be slowly increased until the child is saying sentences. For example, "ball", "red ball", "a big red ball", "I have a big red ball". This process can take anywhere from a few weeks to six months or more. Another stuttering treatment focuses on helping children decrease secondary characteristics like twitching, and closed or clamped jaw (Dale .D, M.C.D, CCC-SLP, 2004). There are also many anti-stuttering medication. Despite of their positive outcome the side effects are often very unpleasant. Also many group therapies have evolved, but there is not any 100% working cure for stuttering (Ball, 1988, pp.51-53).

Another type of speech error is commonly described as a *slip of the tongue*, this produces expressions such as "Use the door to open the key", and "a fifty-pound dog of bag food". Slips of this type are called *spoonerisms* after *W. Spooner* when he complaints to his student who had been absent "*you have hissed all my mystery lectures*". Most every day slips of tongue are simply the result of a sound being carried over from one word to the next. As in "*black bloxes*" (for black boxes) also as in "*roman numeral*" for "roman numeral" or a "*tap of tea*" for "cup of tea", or *the most played player* for "paid player". Easily enough/ *easy enoughly*... Although the slips are mostly treated as errors of articulation, it has been suggest that they may result from "slips of the brain" as it tries to organize linguistic messages (Yule, 2010).

*Speech delay* refers to a delay in the development of mechanisms that produce speech. There is a differences in the development of speech and language. They both are an independent stage and in normal development they progress in the same time, but in cases of delayed development they might be individually affected. For example, a patient might be delayed in speech, but not in language. That means that the patient is unable to produce understandable speech sounds and would be attempting to produce an age-appropriate amount of language, but this language would be difficult or impossible to understand (Škodová, 2003, pp. 91-95).

Speech is the motor act of communicating by articulating verbal expression, whereas, language is the knowledge of a symbol system used for interpersonal communication. In general, a child is considered to have speech delay if the child's speech development is significantly below the norm for children of the same age. A child with speech delay has speech development that is typical of a normally developing child of a younger chronologic

age; the speech-delayed child's skills are acquired in a normal sequence, but at a slower-than-normal rate (Blum & Baron, 1997).

Many factors can cause delays in speech and language development. It, in an otherwise normally developing child, can sometimes be caused by oral impairments, like problems with the tongue or palate (the roof of the mouth). A short frenulum (the fold beneath the tongue) can limit tongue movement for speech production.

Hearing problems are also commonly related to speech delay, which is why a child's hearing should be tested by an audiologist whenever there's a speech concern. A child who has trouble hearing may have trouble articulating as well as understanding, imitating, and using language.

Many kids with speech delay have oral-motor problems, meaning there is inefficient communication in the areas of the brain responsible for speech production. The child encounters difficulty using and coordinating the lips, tongue, and jaw to produce speech sounds (Amy Nelson, MA, CCC-SLP. 2010).

The treatment of delayed speech depends on its cause. If there is a hearing loss or a mental retardation, it is not the speech therapist that is able to help. There are two types of speech delay; One is called the expressive delay and in this case the patient is unable to generate speech. Receptive speech delay is based on the inability to understand the language. In both cases is essential the parental attitude, since it is them who spend the most time with the patient. To improve it, they should read aloud to the child, use simple language, be very patient and use no force and be positive while speaking to the child ( Škodová, 2003).

At the *neurological level (Aphasia)*, the child will loss of the ability to use and understand language, usually caused by damage to the brain. The loss may be total or partial, and may affect spoken and/or written language ability. There are different types of aphasia. Aphasia can be studied in order to discover how the brain processes language (Richards & Schmidt, 2002). it has many types: (1) Broca's Aphasia *as* the most important type, it occurs as a result of an injuries in the Broca's area in the left frontal lobe. Individuals with Broca's aphasia have trouble in speaking fluently, but their comprehension can be relatively preserved. For example the sentence "Mary gave John balloons" may be easy to understand but "The balloons were given to John by Mary" may pose a challenge when interpreting the meaning of who gave the balloons to whom. (2) *Global Aphasia as* the most severe form of aphasia, and is applied to patients who can produce few recognizable words and understand little or no spoken language. Persons with Global Aphasia can neither read nor write. Finally (3) *Wernicke's Aphasia in which* persons can produce many words and they often speak using grammatically correct sentences with normal rate. However; often what they say doesn't make a lot of sense or they pepper their sentences with non-existent or irrelevant words. Often, they are not fully aware that what they say does not make sense (National Aphasia Association, n.d.).

Accordingly, the aim of aphasia's treatment is to improve or recover the ability to communicate. The essential thing for the speech therapist is to know what caused the damage, what part of brain was damaged, how big the damage is and the general condition of the patient. Speech therapists believe that the most effective treatment is in the time immediately following the stroke or head injury, very early after the patient has been affected by aphasia. The fundamental aspects of the treatment are simplifying of the spoken language, letting the patient to be involved in a natural conversation, or repeat difficult words; not distracting the patient while speaking, for example do not talk with the TV or radio on; asking the patient questions; encouraging him or her to try to answer and give him or her as much time as needed. There are also many computer programs<sup>2</sup> that help with the recovery; they extend the patient's vocabulary and provide many exercises (Škodová 2003).



## Methods and Procedures

To achieve our aim, we investigate the speech delay phenomenon among children, and to gather data that could be accomplished by following procedures which are methods and techniques.

The selection of the research method is crucial for what conclusions you can make about a phenomenon. It affects what you can say about the cause and factors influencing the phenomenon. It is also important to choose a research method which is within the limits of what the researcher can do.... (Blackstad, 2008)

In this regard, we relied on the descriptive design, for this paper is interested in a contemporary phenomenon which is the speech delay and its treatment process). This method describes a present situation; so that, the result is to develop applicable future guidelines. Therefore, we have used this method to investigate the speech delay situation among children at Batna city and their speech therapists work besides information about the treatment protocol. In order to carry out the study, we need to count on a research strategy among a specific case which is in the current research is the children who treat in the ORL Center of Batna city, Algeria.

For many years, linguists have debated both speech delay and speech disorders in children, how they acquire language and how they develop speech from early age. We should take into account the causes that can make the child suffer from speech disorders and speech delay and their possible treatment. Besides, highlighting on the contribution of the human brain in these impairments.

The main aims of this paper are to: (1) describe the different speech disorders that can affect toddlers, (2) investigate speech disorders from different angles and its relationship with the neurodevelopment, and (3) investigate the main reasons and the appropriate treatment for such impairments. These aims are based on some research questions: (1) What are the different speech disorders that affect children? (2) What is speech delay and its causes? (3) Which solutions are adopted by speech therapists to treat it? (4) Which kind of difficulties do children and treaters face with this impairment? Regarding the aims and the different questions set previously, We hypothesize that a child's speech delay might be due to many factors: psychological, neuro-biological, social, and /or other unknown factors.

As for the participants, involved in this study, it is known as the population:

A research population is generally a large collection of individuals or objects that is the main focus of a scientific query. It is for the benefit of the population that researchers often cannot test every individual in the population because it is too expensive in time-consuming. This is the reason why researchers rely on sampling techniques. (Kumar, 2009)

To obtain the necessary data related to speech disorders and speech delay among children, the case of toddlers in ORL Center of Batna, we have worked with three main categories: (1) the population is four speech therapists, we work with all of them because of their few available number at the level of Batna city, (2) the population of children's parents equals 40, the equivalent of eight parents of the delayed toddlers, and (3) the population of children (20), the equivalent of three extreme cases of delayed children at the level of Batna city.

However, it is arduous and obvious that the researcher will face some obstacles that will prevent him/her from collecting data through the whole population such as

time, expense and accessibility. Therefore, the researcher has to gather data from a smaller group of the whole population. In this respect, the sample and the sampling techniques are chosen, it included three categories:(1) Due to the few number of the pathologists' population that accepted to work with us which is four (04) pathologists, we used the total population sampling technique.

Total population sampling is a type of purposive sampling techniques where you choose to examine the entire population (i.e. the total population) that have a particular set of characteristics...In such cases, the entire population is often chosen because the size of the population that has the particular characteristics that you are interest in is very small. (Lærd Dissertation, 2016. p.3)

We dealt with the whole population of speech therapists and many factors had helped us in the data gathering such as ease of working, the less energy- consuming, cheapness and the possibility to accomplish, (2) when having a population of 40 individuals among parents, it was hard to work with the total population, In addition to the energy- consuming, expense and time-consuming to carry out the research. A sample is chosen randomly to reduce bias and to accomplish objectivity. So, we decided to use the 1/5<sup>th</sup> of the total population which is considered as eight (08) parents. Finally, (3) in order to collect data from the children's treatment process observation, we need to work with specific cases of delayed children who treat in the ORL Center of Batna city. As long as these children are not normal ones. In other words, they are deviant children. Thus, we have worked with the extreme sampling technique which is defined as:

Extreme or deviant case sampling is a type of purposive sampling that is used to focus on cases that are special or unusual , typically in the sense that the cases highlight notable outcomes, failures or successes. These extreme (or deviant) cases are useful because they often provide significant insight into a particular phenomenon, which can be act as lessons (or cases of best practice) that guide future research and practice... (Lærd Dissertation, 2016, p.4)

The extreme sampling technique is accomplished by working with three (03) children belonging to the center. When the research strategy and sampling have been chosen, it comes the step of data collection procedures that are done with the use of two questionnaires, an interview and an observation. Brown (2001, p6) defined a questionnaire as:

Any written statement that present respondents with a series of questions of statements to which they are to react either by writing out their answers or selecting from among existing answers". Besides, "interviews are particularly useful for getting the story behind a participant's experience. (Kumar, 2016)

Thus, to obtain a valuable data regarding the possible treatment and the main causes behind speech disorders from the ORL center at Batna city, we dealt with the following sample: (1) we have chosen to work with three (03) extreme cases to be observed throughout this study, (2) four (4) speech therapists of speech delay in the ORL center of Batna city to whom we conducted and administered a questionnaire. and an interview, finally, (3) eight (08) parents of toddler suffering from speech delay and who are having treatment in ORL center by selecting only 1/5, i.e., eight parents to whom we conducted another questionnaire.

## Results and Discussion

The analysis and the interpretation of the speech therapists' questionnaire (Q1–Q15), the speech therapists' interview (four areas of investigation of 24 Qs) , the parents' questionnaire (Q1–Q20), and the children's observation (three different cases) , revealed worthy fact and realities that can be summarized in the following (see Appendices A, B, & C):

### Pathologists' Questionnaire Results

1. Children males are more delayed than females,
2. Family situation does not necessarily influence children's health state;
3. Speech Delay does not operate on learning and language acquisition;
4. Speech therapists nowadays in the Algerian society are more consulted than before for different problems even for checking children's health;
5. Speech Therapists at Batna city are not really aware about the life state of their patients;
6. Heredity is not a strong factor to cause speech delay; and
7. Delayed children face serious difficulties in communicating with others.

### Pathologists' Interview Results

1. The Algerian society becomes aware about speech therapists;
2. The speech therapist makes hilarious efforts in moving with the treatment process, especially with the absence of the parents support;
3. Speech therapists are not able to advise for medicines (Prescription);
4. For the diagnosis step, it is obligatory to test children with an adopted test;
5. Speech delay does not demand an intervention;
6. Speech delay treatment consists in practicing many listening and speaking exercises;
7. The psychologist effect of the external environment maybe positive or negative on the child and the treatment;
8. The effectiveness of speech delay therapy is related to the psychological factors
9. Speech delay is a deviation of the linguistic balance;
10. Speech delay does not have certain causes; and
11. The diagnosis step in speech delay is concerned with making adopted tests besides to the child's behaviors observation.

### The Parents' Questionnaire Results

1. Half of children (50%) who suffer from speech delay have the age of five years and the majority (70%) of them are boys;
2. Only 50% of parents are interested to display their children to speech evaluation;
3. Only 50 % of the delayed speech children are observed by their parents that they start talking after the age of two years;
4. Speech delay has no relation with medical and family problems and it cannot be as a result of heredity;
5. All of delayed speech children (100%) are misunderstood from strangers and external environment;
6. About half of delayed children (50% ) communicate better when they play and 40% of them when they use pictures. These tools are considered as the most argumentative systems of communication;

7. Approximately 60% of children struggle when they try to explain themselves;  
 and  
 8. Also, about 50% of delayed children use movements and gestures to react toward their speech delay.

### The Children's Observation Results

- **First Case**
  1. The child is five years old; he is 80% deaf and not trained to use his listening enough;
  2. He is exposure to several exercises; he succeed in 80% of them with some difficulties; and
  3. The more the child listens, the more he speaks and realizes vocabulary.
- **Second Case**
  1. The second child is three years old;
  2. He faces many difficulties in the pronouncing some letters and sounds also in the exits of letters; and
  3. He cannot utter a full sentence, but he can just spell isolates words.
- **Third Case**
  1. The child is three years old;
  2. He is very hard to discipline from the parents and the pathologist himself;
  3. He refused to speak and to play with the pathologist; and
  4. As a result of his behavior the pathologist decided to orientate him to psychologist to adjust his behaviors and reactions to diagnose the case in normal conditions.

### Implications

Implications for Parents	
Before discovering their child's speech delay	After discovering their child's speech delay
<ol style="list-style-type: none"> <li>1. Listen to your child's talk and try to grasp how s/he communicates</li> <li>2. Compare your child's speech with his/her playmates who are about the same age</li> <li>3. Compare their performances what results is an impression of whether or not your child's is developing speech and language or a normal late</li> <li>4. Check your impression with other parents and relatives, if you are sure about your child's speech delay you should see a speech-language pathologist.</li> </ol>	<ol style="list-style-type: none"> <li>1. As a parent, you should be always with your child when s/he is with his/her pathologist.</li> <li>2. Parents should learn how to use a specific language by building strategies with their child everyday activities.</li> <li>3. They should learn about how to promote their young child's communication at home.</li> </ol>

### Implications for Pathologists

1. Talk about what you are doing this called "self-talk", talking about what you are seeing, eating, listening to. And it is better to keep your sentences short and fun



2. Narrate what you are doing simply gives the child exposure to language and helps him/her understand that fun and functional.
3. Do not ask the child too many questions, because the child will feel that you are testing him/her and can be overwhelming rather than saying simple comments.
4. Give the child choices. When we give toddlers choices, we are telling them that they have some control and their input matters and encourages decision making and promotes language development
5. Expand your toddlers language by the reach of his/her grammar.

## Conclusion

This paper investigates the "Speech Delay and Disorders among Children", it aims at: (1) gathering data concerning everything that has a relation with speech disorders, speech delay in children, (2) investigating what kind of causes that can be behind speech disorders and speech delay,(3) looking for any possible treatment that can end or at least minimize the impairments, (4) identifying how the human brain associated with language and describe the neurological development of speech in childhood.

Thus, speech delay is a disability that should be dealt with as aware as possible, and should have a clear picture about its causes, treatment, and symptoms especially by parents to become more conscious about speech disorders and the health of their children. In comparison with the literature review, we affirmed some facts such as the neurodevelopment of the normal child with the delayed one and the impossibility of having an immediate treatment such as medicines or surgeries. In the other hand many facts were not confirmed the ones that are related to the speech therapists work with toddlers. Other facts which were not asserted with the theoretical findings is that speech delay does not have certain causes.

Speech delay is a disability that should be dealt with such an awareness. The parents' performances in the treatment process is important as the pathologists' one for best treating the toddler. All in all, we achieved the study aims and reached the answers to the research questions. To conclude, the following Table 2 (see Appendix 2) showed the general milestones of the speech development a normal child which the speech therapists use.

## Appendix A

### Speech Therapists' Questionnaire

This questionnaire is conducted and administered to the speech therapists of Batna Center "ORL". It aims at evaluating the toddlers' speech delay and language disorders, to understand the difficulties that the child struggles, and to take the milestones of a normal and a delayed child.

1/-Age :.....

2/-Gender

- Girl
- Boy

3/-The client live with:

- Biological family
- Adopted
- One of his parents
- Grand-Parents

Mention them:.....

4/-Does the client speaks another language than Arabic?

- No
- Yes
- What is it? .....

5/-Does the toddler understand this language?

- Yes
- No

6/-Does the child have a language disorder?

- No
- Yes

Mention it .....

7/-Does the child have an auditory problem?

- Yes
- No

8/- Which type of language disorders that he suffer from?

- Simple speech delay
- Complex speech delay
- Stammering
- Cluttering
- Others .....

9/-Does one of his family have the same problem?

- No
- Yes
- I ignore

10/-Who understand the toddler:

- HIs mother
- His father
- Family
- Strangers

11/-What does the toddler understand ?

- Isolated words
- Complex sentences
- Conversation
- Short sentences

12/-Which treatment did you suggest for him?

- Exercises
- Medicines
- Medical intervention
- Others

Mention them:.....

13/-Describe his relationship with his family and you:.....

14/-Describe the child's behavior during the consultation.....

15/-Was the treatment suggested effective:

- Yes
- A bit
- No

## Appendix B

### Parents' Questionnaire

This questionnaire concerns the children's parents who struggle with speech delay. It aims at knowing how parents evaluate their child's behavior who suffers from speech delay and language disorders and also at understanding the difficulties which face the child at home.

1/-Age: .....

2/-Gender:

- Girl
- Boy

3/Has your child ever had a speech-language evaluation before?

- Yes
- No

4/when your child first begin to talk?

- 1 month to 18 months
- 18 months to 2 years
- After age 2

5/Tell me what concerns you about your child's speech.

- He repeats, starts over
- He talks too fast
- He stutters, clutters
- Others.....

6/When did you first notice this problem?

- From his birth
- 1 to 2 years ago
- Others.....

7/Is there a history of speech delay in your family?

- Yes
- No
- Distant relatives history
- Immediate family

8/Have you had any unusual medical problems?

- Normal problems
- Serious illness but unrelated to speech
- Serious illness which can be related to speech

9/Have you had any unusual family problems lately?

- No problems
- Serious problems

10/How does your child get along with other children?

- He has normal children to play with
- He has no other children to play with
- He is externally shy when around other children
- Others.....

11/Describe your child's favorite play activity.....

12/Is your child difficult to discipline?

- No just normal
- Sometimes
- Yes very difficult to handle

13/How often does your child ask questions?

○ Very often

○ Not very often

○ Hardly ever

14/Does your child start activities/conversation with others?

○ Yes

○ No

○ Hard

15/If the strangers have trouble understanding your child, do you think it is because of his speech problems?

○ Yes

○ No

○ Explain.....

16/When does your child communicate best?.....

17/When does your child have the most trouble communicating?

○ Sometimes

○ All the time

○ With strangers

○ When he trying explain something

○ Others.....

18/How does your child normally react to his problem?

○ When he just keep talking

○ When he use unusual ways of speaking

○ When he use movements, gestures, etc.

○ Others.....

19/-What type of augmentative communication system(s) does your child use

○ Signs

○ Pictures

○ Symbols

○ Others.....

20/- Is there anything else you would like us to know about your child?.....

## Appendix C

### Speech Therapists' Interview

Areas of Investigation	Questions
General Information	1. What is the average age of patients that consult you? 2. What is the most common gender they are? 3. How do patients come to you? (Parents' desire /Medical advice/Others.) 4. Do you consult them by themselves or accompanied with their parents? 5. What are the common behaviors of toddlers when visiting you? 6. What are the key developmental observations that you can do during a brief office visit? 7. What is the first step that you do when the toddler come to you? 8. How does the evaluation take place? Where? When? What are



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	<p>the questions asked during the evaluation?</p> <p>9. How long does the therapy take place?</p>
<b>Dealing with Toddlers</b>	<ol style="list-style-type: none"> <li>1. What are the references that you use to diagnose the type of the disorder?</li> <li>2. When you find difficulties with a patient (example: he does not accept you), what is the immediate reaction that you perform?</li> <li>3. Do all patients are punctual in the appointments?</li> </ol>
<b>Speech Delay</b>	<ol style="list-style-type: none"> <li>1. As a therapist, how can you define speech delay?</li> <li>2. What are the main causes of speech delay?</li> <li>3. Do you consider being a twin is an appropriate cause to be a speech delayed child?</li> <li>4. What is the epidemiology of speech delay?</li> </ol>
<b>Treatment Enrollment of Speech Delay</b>	<ol style="list-style-type: none"> <li>1. What are the appropriate interventions for children with speech delay?</li> <li>2. What are the different types of treatments suggested?</li> <li>3. How long does the treatment take place?</li> <li>4. Who are people who should help in the treatment?</li> <li>5. How can parents help in the treatment process?</li> <li>6. Where does the treatment occur?</li> <li>7. What is the social effect on the toddler before, during and after the treatment?</li> <li>8. Is the common treatment effective?</li> <li>9. Is surgery an effective solution?</li> </ol>

## References

- Amy Nelson, M. A. CCC-SLP. (2010). *Delayed speech or language development – Nemours* by Alfred. IduPont –Hospital of Children.
- Ball, M. J. (1988). *Theoretical linguistics and disordered language*. Suffolk: St Edmundsbury Press Ltd.
- Blakstad, O. (Mar 10, 2008). *Research methodology*. Retrieved (Jun 03, 2016) from <https://explorable.com/research-methodology>
- Blum, N.J., & Baron, M.A. (1997). Speech and language disorders. In M.W. Schwartz, (Ed.). (n.d.). *Pediatric primary care: A problem oriented approach*. (845–849). St. Louis: Mosby.
- Brown, H. D. (2001). *Teaching by principles: An interactive approach to language pedagogy* (2<sup>nd</sup> ed.). New York: Longman.
- Dale Ducworth, M. C. D. CCC-SLP. (2004). *Super duper publications*. Retrieved from <https://www.superduperinc.com>

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- Dr. GHODBANE Nacira

- Kumar, V. (2016). *Interview: Method in a research*. [slide]. Retrieved from <http://fr.slideshare.net/mobilre/VinayKumar49/interview-method-in-research>.
- Leung ,M.(1999). Evaluation and management of the child with speech delay .*American Family Physician*. 59(11).Retrieved (June ,1999) from <http://www.aaafp.org/afp/990600ap/content.html>
- National Aphasia Association. (n.d.). *Aphasia definitions*. Retrieved from <http://www.aphasia.org/aphasia-definitions/>
- National Institutes of Health. (March, 2013).Medline Plus. Language Disorder – Children. Retrieved from <http://www.nlm.nih.gov/medlineplus/ency/article/001545.htm>
- Purposive Sampling | Lærd Dissertation. Retrieved (18, April 2016) from file:///E:/djamel/these%20doctorat%20final%202017/files%20bdesk/files/sampling/Purposive%20sampling%20\_%20L%C3%A6rd%20Dissertation.htm#types. (pp.1–4)
- Richardson, J., Schmidt, R. (2002). *Language teaching and applied linguistics*. (3<sup>rd</sup> ed.). Pearson Education Limited.
- Škodová, Eva a Jedlička, Ivan.(2003). *Klinickálogopedie*.Praha: Portál.
- Wingate, M. E. (1964). A standard definition of stuttering. *Speech Hear. Disorder*, 29, (pp.484–489).
- Yule, G.(2010). *The study of language* (4<sup>th</sup> ed.). New York: Cambridge University Press.