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# **ARTICULATION DISORDERS AND ITS IMPACT ON CHILDREN'S PRONUNCIATION**

**DISSERTATION SUBMITTED IN FULFILLMENT OF THE  
REQUIREMENTS OF MASTER'S DEGREE .**

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## *Dedication*

*I dedicate this humble and honorable work to my dearest parents. You have given me endless love, care, and precious senses of supplication.*

*For all my family members both HAGANI and BELGHOUL. I dedicate this work to my little sisters NOUCIEBA and DOUAA, thank you for making it easier for me in the hardest time with your sense of humor. To all my cousins without any exceptions especially my twin from another mother CHIFAA I love you so much. For my only friend HAYET, I will miss you and thank you for your endless help, without forgetting my friends from our class and campus without exception it was amazing to meet you guys. For all who help me to achieve my work.*

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## ABSTRACT

Communicational abilities are something that is taken for granted; however, some children have serious difficulties in developing their speech, which in turn can affect their ability to express themselves and develop a relationship with others. There are different types of articulation disorders. This paper focuses on identifying the most common speech disabilities among children, the main reasons behind them, and the possible treatment of such impairment. This study aims to explore the impact of articulation disorders. The study deals with children aged 3–5 years old, who are randomly chosen from different regions in Mostaganem city. To accomplish such aims, we choose a reliable instrument such as a questionnaire. The key findings of the study show that articulation disorders do 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.

**Keywords:** Speech, Impairment , Communication, Treatment , Articulation disorders

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## General introduction

Language is a cognitive skill that takes first place in human communication. Without language, life would be very difficult. In linguistics theories, we can see a long-standing debate on whether language is innate or acquired from the environment surrounds us. Chomsky the father of universal grammar theory, believed that “language is innate” in another expression we are born with previous knowledge (of being), and by the time we learn grammar for a better and meaningful speech.

communication is one of the most important skills in human lives by which he can express his thoughts, ideas, and emotions. it is divided into two kinds: verbal and non-verbal communication.

Verbal communication deals with spoken language whether it is spoken or written. the other one is non-verbal communication, it agrees with signs languages like facial expressions and body language. Thus, block and interrupt such a process will create a serious problem specifically during the childhood period. One of the most speech disabilities that may face children is articulation disorders. It can create an obstacle to both language acquisition and learning. Such an obstacle may cause a gap between a child's life. The brain's linguistic system allows humans the opportunity to talk, understand speech, write, and read. As well, it gives us the power to acquire new knowledge.

In this regard, articulation disorders refer to the common difficulties during the production process of a given sound. And it is characterized as speech sound production errors. Also, the luck of this process may create a serious obstacle to receive and produce the speech sounds in the right sequence.

Parents should search for the speech therapy intervention to put solutions and limits to this kind of errors. An infant can find another way to express himself by body movements, eye contact, and even with signs but it stills not enough to receive the correct message without misunderstanding him. so, when parents doubt some issue in their child's pronunciation they should directly see a speech pathologist assess their child's case.

Such a case leads me to investigate the possible reasons and problems that face children's pronunciation and its impact on their daily lives.

The study seems significant for the aims to attain motivation. First, to discover children's sufferance and how they find it difficult to transfer a message to others without misunderstanding them. The second aim, to raise parent's awareness about this kind of disorder and show them the possible reasons or the risk factors underlying it. The third aim, to suggest appropriate ways and solutions for these disorders and lead parents to take their children for early diagnosis and treatment.

The present dissertation attempts to clarify the literature review of articulation disorders. specifically, it provides a general summary of speech sound disorders with both types of articulation and phonological disorders. Another key fact to remember is that this piece of research gives the historical background of phonetics as well as giving explanations to fully understand the articulation errors the study at hand is conducted to answering three research questions to achieve the objective of the work. The questions are as follow:

- 1- What are the most articulatory problems that face children's pronunciation?
- 2- What are the obstacles for the child to convey the correct expression?
- 3- What are the causes of articulation disorders?

To pursue the study answers, the hypothesis is presented here:

1-Failing to correctly pronounce letters and words at the expected age, also the misunderstanding of them by others.

2-One of the most familiar obstacles are: being disappointed while communicating with others. Produce understandable speech even with family members. Difficulties in linking two sounds or more together and staying isolated.

3-most of articulation disorders are with unknown causes .otherwise, we can find some cases inherits this deficiency from their family members or it came from pregnancy bad conditions.

The study has been conducted on social media, a questionnaire was distributed online to 35 parents, precisely in Mostaganem regions (Mostaganem, Bouguirat, Sidi Ali, Sidi Lakhdar, and Ben Abdel Malek Ramadan ). It was shared on Facebook groups. Sixteen questions consisting of open and closed questions that investigate the impact of articulation disorders on children's pronunciation.

The great importance that pushed the researcher to come up with a better understanding of the study purposes.

In this piece of research, the first chapter will abstract the literature review. We tackle the key concepts about articulation disorders, by explaining the main risk factors and how it affects children's pronunciation. the second chapter is devoted to giving the methodology and data analysis of our study to prove the validity of our hypothesis. a questionnaire is analyzed to answer the inquiries objectives of this study. Then, the third chapter is about our findings we discuss them as possible as we can .tips and recommendations suggested to parents for better results in their child's treatment, without forgetting the limitations that face us during conducting this research.

# **CHAPTER ONE**

**( LITERATURE REVIEW )**

## 1. Introduction

This part gives a hypothetical framework that focus on the idea that builds the whole research throughout this dissertation. A brief account of definitions, theories, an overview about phonetics background with its subfields , the development of speech production with its milestones .Also , speech sound disorder with its both types phonological and articulation . Besides, a detailed description of articulation disorder. Finally , children’s articulation types with taking into consideration the possible common causes and effects of children passing through such adversity. The scope of this dissertation is to explore a literature review by different composition authors and scholars attempting to report the major cases in which children articulation disorder can be diagnosis.

### 1.1. Phonetics background

phonetics is one of the oldest sciences it begins from the 6<sup>th</sup> BCE till nowadays . To discover its origins ,we must return to the previous centuries when did it begin first .

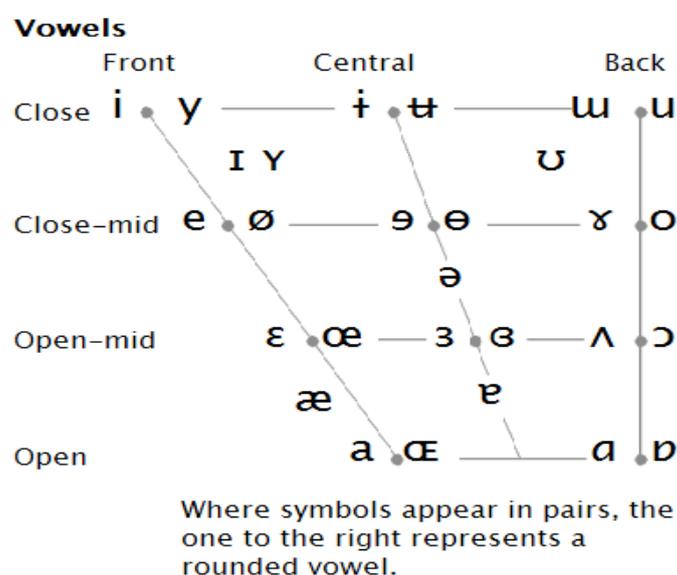
“ The history of phonetics going back some 2.5 millennia makes it perhaps the oldest of the behavioral sciences and, given the longevity and applicability of some of the early findings from these times, one of the most successful ” *prof .john ohala ,uc berkeley,1991.*

According to William Katz (2017) ,early roots of phonetics begin in India and Korea .The Indian Panini around 4<sup>th</sup>-7<sup>th</sup> centuries B.C.E .He works on Sanskrit and his work was very modern and systematic. Panini discover grammar that’s helped to develop our today’s linguistic science.

In Korea king Sejong 1397-1450, he knows that the existing (Chinese-based) system was difficult and he wanted his people to learn and know literature, he explored an entirely new alphabet based on phonetics.

Sir William Jones 1746-1794 a British linguist and a famous scholar, he set a trend for studying Sanskrit as a basis for the “Indo-European language family”, roots of historical linguistics. Also we have Henry Sweet 1845-1912, English phonologist and phonetician, a pioneer in modern scientific phonetics. His *History of English Sounds* (1874) was a landmark study.

Daniel Jones 1881-1967 a professor at London University. He used the technical term “phoneme” in the modern sense and at the same time Jones is the father of IPA, suggested a cardinal vowels diagram to see how vowels are produced.



**Figure 1. the ENGLISH IPA cardinal vowels chart**

The term phonetics is taken from the Greek word “phone” which means the sound or voice. “the study of the speech sounds and how they are produced” (Oxford Dictionary)

According to Ogden (2009) phonetics is done according to a system or plan of sounds, it looks at the natural production of sounds, focusing on which vocal organs collaborate with each other and how these organs are in relation to one another. Phonetics also looks at the

approach of articulation, occurring at the pair of muscles found in your voice box (Adam's apple).

crystal (2008) defines phonetics as a scientific study that explain the classification of sounds whether they are consonants or vowels, description of sound that deals with the place and manner of articulation and the transcription of each phoneme by giving a specific symbol for each one . Phonetics divides into three subfields which are :

### **1.1.1. Articulatory phonetics**

Refers to the “aspects of phonetics which looks at how the sounds of speech are made with the organs of the vocal tract” Ogden (2009:173).

According to Ogden (2009) articulatory phonetics deals with the mechanism of how sounds are made by the organs of speech (lips, glottis, teeth, tongue, uvula ,velum, hard palate, alveolar ridge). The production of sounds includes three (03) processes which are:

**1.1.1.1. Initiation:** setting air in motion through the vocal tract.

**1.1.1.2. Phonation:** the modification of airflow as it passes through the larynx (related to voicing).

**1.1.1.3. Articulation :** the shaping of airflow to generate particular sound types (related to manner) .

### **1.1.2. Acoustic phonetics**

It is a subfield of phonetics which deals with acoustic aspects of speech sounds through varying frequencies, amplitudes and durations. To analyze the acoustic properties of speech sounds is through looking at a waveform.

### **1.1.3. Auditory phonetics**

“The study of the perception of speech sounds. Related to neurology and cognitive science.” JIRKA (2011: 02)

Auditory phonetics it is concerned with speech perception ,it focuses on how the brain forms perceptual representations of the input it receives. It based on listener's ear and his brain .

## **1.2. The development of speech production with its milestones**

Speech production is a process which transformed thoughts into words. Its carry the selection of words, organization of grammatical forms, and then the articulating of the resulting sounds by the motor system using the vocal device.

The first baby talk is nonverbal and comes directly after birth .To express a range of emotions and physical needs your baby cries, grimaces and squirms to express his fear, hunger and his other needs.

The good parents should discover and differentiate between different ways of crying by their baby , to interpret it and give him what he needs. Infants seem to make the same variety of sounds, even children who are born deaf (Lenneberg et al.,1965) .

according to Web Md (2005) website , next paragraphs summarizes the main millstones in baby's life .

### **1.2.1. Baby talk Milestone**

- **3 months :**

Infant at this age prefer to listen to a different voices .for example , mother voice , music, sounds and watching you while talking to him .By the end of three months , he begin to “cooing”

- **6 months:**

The baby start babbling with various sounds. Such as “ba-ba” or “dada” .By the end of this age “Around age 6 months, they begin to babble. This allows them to connect consonant sounds with vowel sounds in ways that are used in their native language to make distinguishable

syllables” (ANGELA OSWALT .N.D.) Also they respond to their names and discover their native language , express feelings whether they are happy or upset using their tone of voice. We considered babbling at 6 months is made up randomly without any comprehension or real meaning.

- **9 months:**

They may use some consonant sounds and tones of voice . Also they can understand few words like ”no” and “bye-bey”.

- **12-18 months:**

Most babies pronounce a few basic words like ”mama” and “dada” by the age of 12 months And know what they are saying. At least they understand your request “ please give it to me” . After 18 months , infant is able to say a lot of words and repeats sounds he hears from you. Actually he repeats the end of sentences or some sounds that they may feel it difficult to say such as “banana” they may say “ nana” , “dow” for “dog” and sometimes he names things according to it’s sound for example “ meao” for “cat” .

- **2 years:**

Babies pronounce few words in short phrases; such as “mummy bey-bey” or “ me water” . They just pronounce it the way they feel it comfortable . After two and half the infant develops his speaking skills and he will be able to say a sentence with two or three words and he will use a lots of words and will be easy to understand him while talking.

- **3 years :**

Around the age of three years old child’s ability of production and perception of speech are largely increased he will be able to produce a correct words like an adult. He/she also will be able to understand the symbolic and abstract language of feelings like “ sadness.

### **1.3. Speech Sound disorders**

It's normal for children in their path of learning a language to have problems in saying some words correctly. Their speech skills develop over time. By the age of eight (8) almost all children can master the majority of word sounds.

Children who can not master the word sounds after the age of eight (8) we can say that they have a speech sound disorder. According to McLeod and Baker (2017) "Speech sound disorders (SSDs) is a generic term used to describe a range of difficulties producing speech sounds in children".

(SSD) in young children is 8-9% by the first grade have a speech disorder with an unknown cause (NIDCD). 80% of children with a phonological disorder are severe enough to visit a speech pathologist and take the suitable treatment (ASHA).

The American speech-language-hearing association (2019) clarifies (SSD) as a deficit in making sounds and sound patterns.

S.I. Green, C.D. Qualls (2010) states that when such an error continues after the development age at which that child has to produce a sound correctly then we can assure that he has an (SSD).

### **1.4. Types of speech sound disorders**

#### **1.4.1. Articulation disorder**

NIDCD explains that it is a speech disorder which involves a difficulty in producing (articulating) specific sounds. It is characterized by speech sound production errors (e.g., sun is pronounced thun).

### 1.4.2. Phonological disorder

According to( ASHA) , It is described by the weakness to pursue the rules that control production of sound combinations (e.g., in the pronunciation of the /s/ like the word “spoon” the tip of the tongue should be close to the backside of the top front teeth but for someone who has a phonological disorder may say “poon” which is a replacement of the tongue position).

### 1.5. Children’s articulation disorders and its possible causes

The most common communicational disorders in childhood is speech sounds errors (articulation). It has been predicted that articulation take 75% of all speech disorders in children’s lives . A big number of these articulation disorders have no organic, neurogenic, or physical relationship. According to speech-language pathologists in schools, children with articulation disorders of unknown cause takes nearly 99 % of the total number. (NIH guide , 1994) .

### 1.6. Articulation disorder types

We can find four types of articulation disorder that is collected under the word (soda) , which is represented for substitution, omission, distortion, and addition .

The types examples listed above are mentioned in “types of articulation errors” article by JULI AND DYMT (2009)

#### 1.6.1. Substitution

“A Term Used In Linguistics To Refer To The Process Or Result Of Replacing One Item By Another At A Particular Place In A Structure.” (A Dictionary Of Linguistics And Phonetics, 2008, p.463)

**Examples:** “Wed” For “Red,” “Thoap” For “Soap,” “Dut,” For “Duck”

### **1.6.2. Omission**

When We Omit A Sound From A Word (Also We Know It As Deletion) .such an error effects more on the intelligibility ,which make the speech difficult to understand by others.

**Examples:** “P\_Ay The Piano” For “Play The Piano”, “G\_Een\_Nake” For “Green Snake”

### **1.6.3. Distortion**

Produce A Sound In An Understandable way (misarticulated sound).

Example: a child with a lisp tries to say “sun” he will pronounce “ shshun”

### **1.6.4. Addition**

Include An Extra Sound Within The Word .

Example: “Buhlack cup” For “Black cup,” “Doguh,” For “Dog”

## **1.7. Articulation disorders etiology(causes)**

The Major Articulation Disorders Causes Before The Age Of Eight (8) Are Without Any Specific Reasons; however, some of dangerous factors and circumstances have been investigated. First gender ,the incidence rate of articulation disorders is higher in males than in females by (ASHA web article). Then , pre- and perinatal problems, such as maternal stress or infections during pregnancy period , complications and preterm delivery, low birthweight (ASHA) After that , family history (genetic case) child who has family members (parents or siblings) with articulation problems and/or language difficulties is more likely to has a speech disorder (. Also we find other factors , such as physical issues ( hearing loss , dental abnormalities like teeth position, bones , tissue of the jaw and mouth , Chronic Infections and Most Types Of Mental Retardation and neuromuscular disorders ) (ASHA)

### **1.8. Articulation disorders impact on children**

Articulation disorders may impact on children in several ways. First, poor communication skills because of misunderstanding them while speaking( sounds distortion ).also child maybe less social interacted when he/she feels that no one understands them ,so, they feel lonely .

Another reason is a behavioral problem, for example, being more aggressive and disobeyed. Finally , hearing loss and speech problems may leads to a serious problem in our daily life. Child during his/her school life needs some skills like :reading and hearing skills so that when some organs are inefficient it guides to a poor academic performance .

## **1.9. Conclusion**

To Sum Up, from this literature review , children in a certain age they may face some difficulties in their speech production . we have discussed a plenty of issues that can be an interruption for children's pronunciation such as articulation disorders , which make their messages unclear for us. we have seen the main possible causes that leads to that problem and their impact on the child itself. be sides that and from what we have deals with , parents will observes and notice whether their infant's speech production are correct or not and when they should take children to the early diagnosis . .Thus, the next chapter will explain and show what behind articulation disorders from parent's questionnaire.

# **CHAPTER TWO**

**( METHODOLOGY & DATA  
ANALYSIS )**

## **2. Introduction:**

As far as the researcher came to the practical section, it is important to briefly recapitulate the first chapter then to move to the next one. The first chapter led to shed light on the impact of articulation disorders on children's pronunciation, also the main causes and effects of this issue. On the other hand, the second chapter is a descriptive qualitative research design was used to provide answers to questions underlying and associated with a specific particular research problem. Also it gives explanations about the tools and methods used in the study. A questionnaire is analyzed in details to give concrete evidence to the questions that are raised in this chapter. relevant answers are provided for the study purposes.

### **2.1. Research questions**

The study at hand is conducted to answering three research questions in order to achieve the objective of the work. The questions are as follow:

- 1- What are the most articulatory problems that faces children's pronunciation ?
- 2- What are the obstacles for the child to convey the correct expression?
- 3- What are the causes of articulation disorders ?

### **2.2. Research hypothesis**

- 1- Failing to correctly pronounce letters and words at the expected age, also the misunderstanding of them by others.
- 2- One of the most familiar obstacles are : being disappointed while communicating with others. Produce understandable speech even with family members . They are unable to connect between two sounds together and prefer staying isolated from others.
- 3- Most of articulation disorders are with unknown causes .otherwise , we can find some cases inherits this deficiency from their family members or it came from pregnancy bad conditions .

### **2.3. Study design**

For the study sake of articulation disorders and its impact on children's pronunciation, we provided this research with more evidences to make it clear enough. A qualitative questionnaire that aims to analyze the different kinds of articulation disorders with their different causes whether they are genetic, physiological disabilities or unknown causes. The questionnaire however, is qualitatively analyzed, and it also backs up my hypothesis to prove that articulation disorders are not just destroyed the way of talking but it also causes a big problem in children lives psychologically.

### **2.4. Data collection**

The study is conducted at social media, a questionnaire was distributed online to 35 parents, precisely in Mostaganem regions (Mostaganem, Bouguirat, Sidi Ali, Sidi Lakhdar and Ben Abdel Malek Ramdan). It was shared on Facebook groups. Sixteen questions consisting of open and closed questions that investigate the impact of articulation disorders on children's pronunciation.

A great importance that pushed the researcher to come up with a better understanding about the study purposes.

### **2.5. The target group**

The target group of our practical framework consists parents from different regions (Mostaganem, Bouguirat, Sidi Ali, Sidi Lakhdar and Ben Abdel Malek Ramdan) they are concerned with those sick children.

The participants were randomly selected aged from 25 to more than 33 years old in order to reap further information to serve the research questions.

This study aims at tackling the main impact of articulation disorders. Therefore, a questionnaire is analyzed by a qualitative research method. And it is used as a tool for providing

relevant answers. Two pages questionnaire is distributed via net to the participants. The 16 questions were a mixture of open and closed ones.

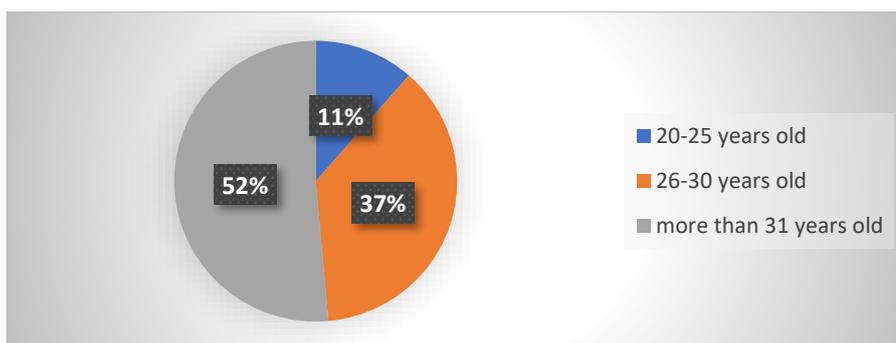
The objective of the open questions is to give the participants the opportunity to present their own words to answer and to discover each and everyone's point of view about the study purpose as well, whereas closed ones are solely cross boxes that are pre-written answers able to be selected.

## 2.6. Data analysis

In order to achieve the study purposes, questions were posed in a form of a questionnaire and were fairly responded to reach a higher understanding about articulation disorders and its impact on children lives.

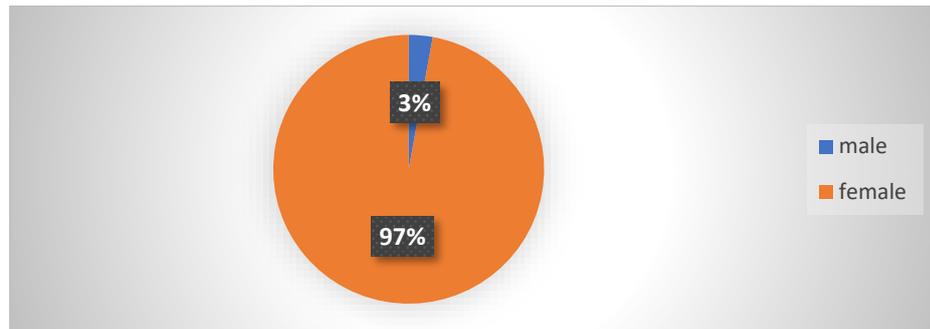
After gathering the data, here is a summary of the key stages in the process of analyzing the data:

The first question , aims to investigate the age of one of the parents . And it is a closed ended question . results shows that 52% of parents are at the age of 33 years old or more .



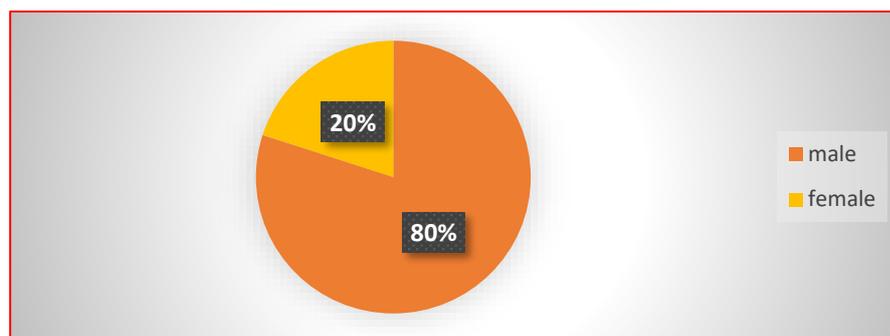
*figure 2. one of the parents' age*

The second question is also a closed ended question , it attempts to answer the following question “ *what is your gender?* ” , in order to have a look about if the participants is the mother or the father of the child to take a precise answers. The answers as follows :



*figure 3. participants gender*

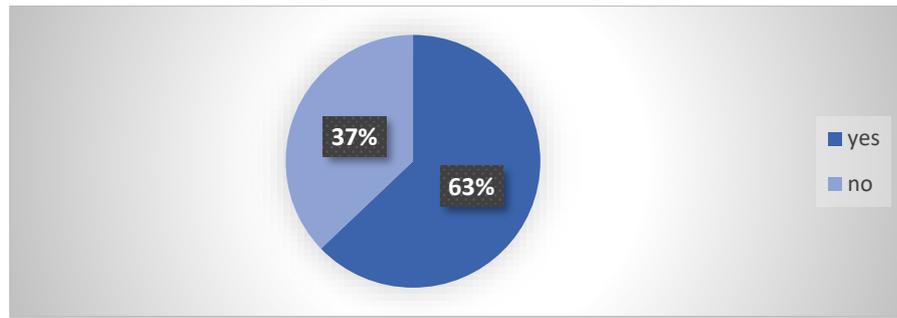
The third question is “*what is your child gender*” , this one it aims to investigate which gender is more likely to have an articulation disorders. The chart bellow shows that the most who suffers from articulation disorders are boys about 80% and only 20% are girls .



*figure 4. child gender*

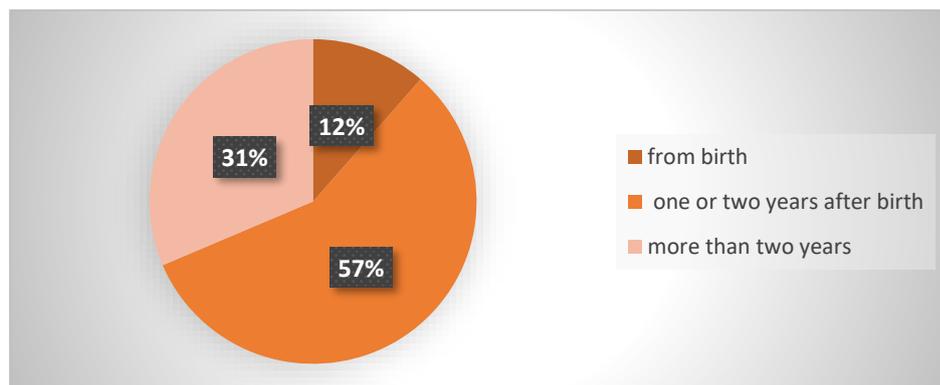
After askin extra questions , the forth question was a closed ended one ; the question asked was “ *Has your child been evaluated by a speech pathologist ?*” .

Its purpose is to discover the awareness of articulation disorders among the participants .it was remarkable that the majority of the participants know to what this disorder refers to. And they considered it as a serious issue .



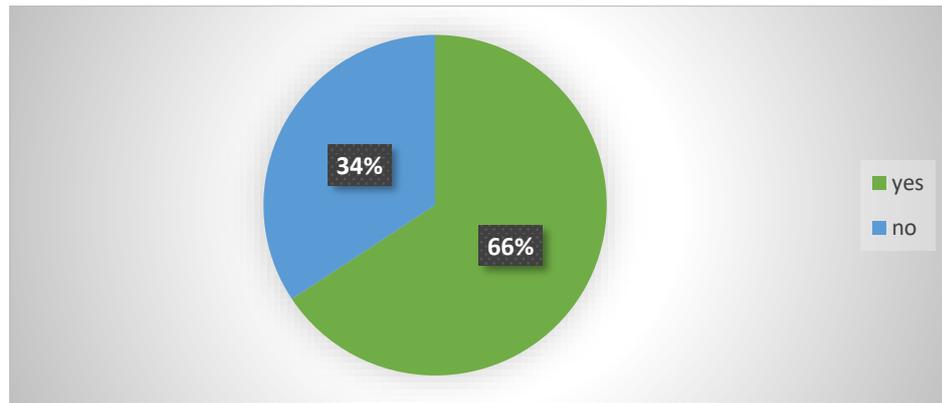
*figure 5. evaluation by a speech pathologist*

The fifth question is proposed to find out how long the child has had this disorder . as we can see in the chart the majority of parents can not discover this disability after one or two years after birth of their child, because they think that it is just a matter of time that needs not to a speech pathologist .



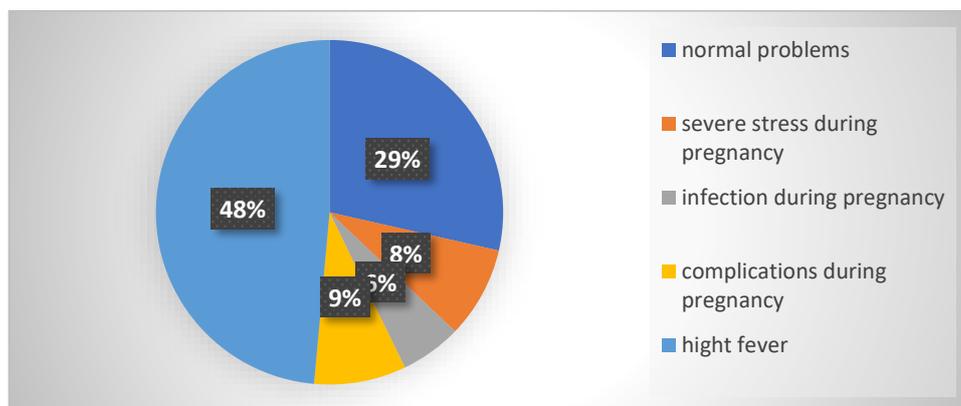
*figure 6. beginning of speech difficulty*

The sixth question is a closed-ended one; its objective is to know if there is someone in the family who has the same problem and to find out whether these disorders are hereditary or acquired . 66 % of participants responded by “yes” and 34% of the participants picked the answer “no”.



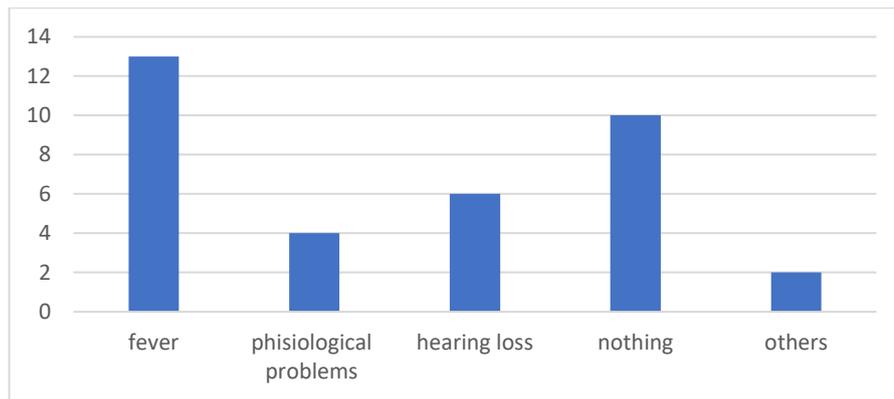
*figure 7. the history of A.D in the family*

The seventh question targets the main problems that faces mothers during their pregnancy . As we can see in the graph , the majority of mothers passes through high fever problem.so, the reason behind asking such a question to investigate the problem of articulation disorders influenced by those conditions.



*figure 9. types of pregnancy problems*

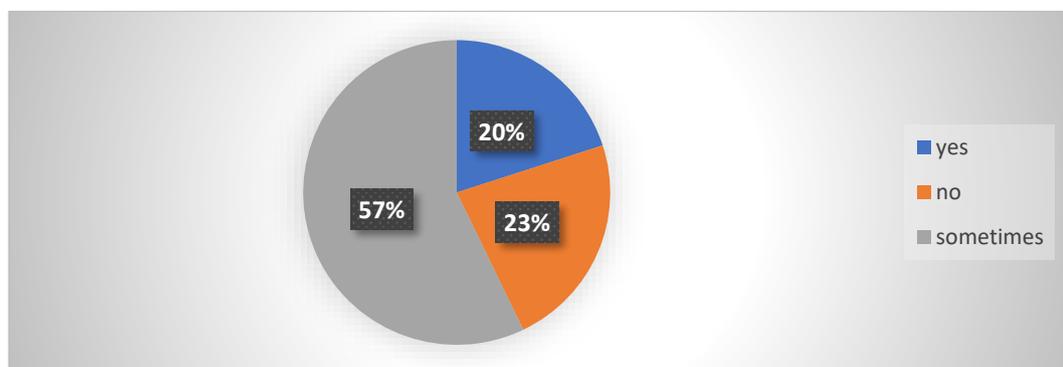
The eighth question an attempt to find out the possible causes of articulation disorders .we suggested five cases, 10 participants selected *nothing* and 13 one said that their child suffered from *fever* . 4 participants declare that their infant had a physiological problem while others selected *hearing loss* as an issue.



*figure 10. articulation disorders cause*

The ninth question aims to discover if parents understand their child talk or not .As we see in the chart bellow , 57% participants said that they sometimes do not understand all of their child speech .while 23% participants do not understand it at all and 20% from them select “yes” so they do understand every single word said by their infant .

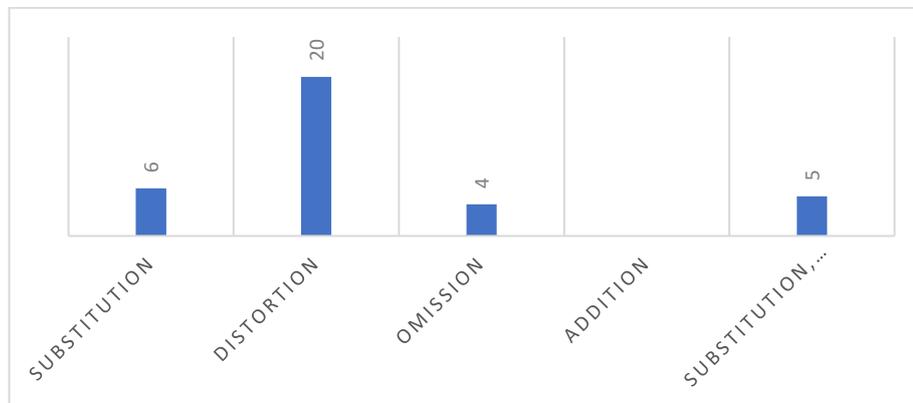
By this answers we can say that sometimes parents can not understand their infant talk because of the distortion of sounds that leads to changing the meaning of the word .



*figure 11. the clarity of the speech*

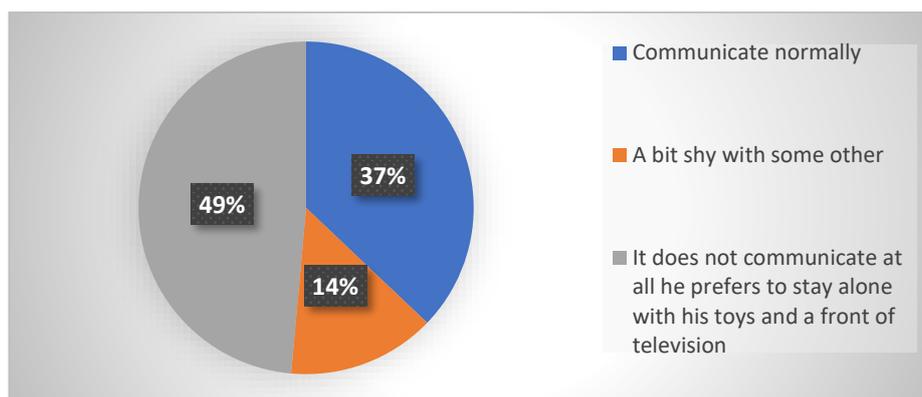
The tenth question was closed ended one attempting to explore different types of articulation disorders .The majority of participants (20) choose “distortion “ , the others six selected “substitution” , five participants said “ substitution, distortion, omission “ and the last four

choose “omission” as an issue in their child talk . While seeing the answers we can find out that children reformulate (destroy the word) their talk when they feel it hard to pronounce .



*figure 12. articulation disorders type*

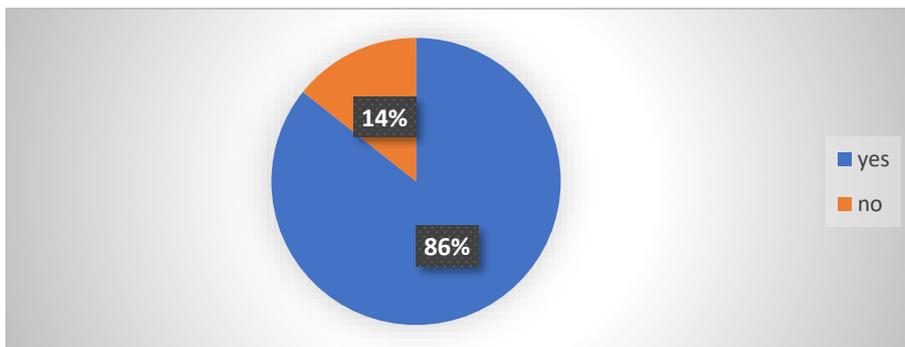
The eleventh question is a closed ended one , its purpose to test the relationship of children with people or even at home .sometimes a lot of children prefer staying isolated with their toys or a front of TV , this behavior makes them anti-social which leads to serious problems such as : autism and speech sound disorders .The chart bellow explain and shows that 49% of children are isolated even at home .



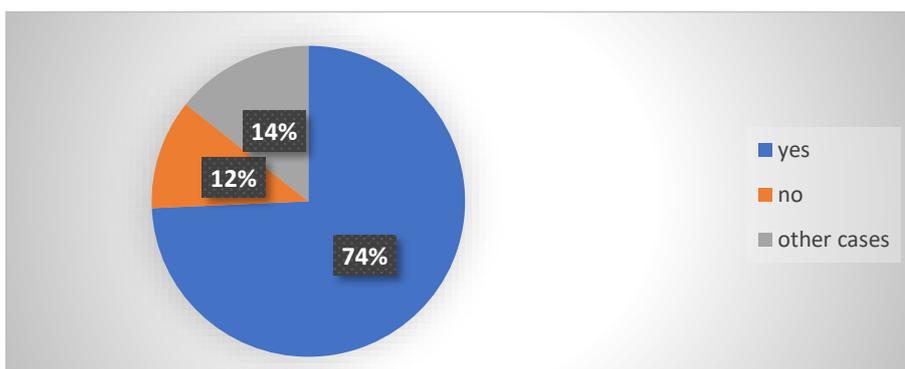
*figure 13. child communication*

The twelfth and the thirteenth questions are as follows: “*have you ever tried to correct your child's speech and do home sessions with him?* “, “*if a stranger talks to your child and finds it difficult to understand him, do you think it is because of his pronunciation?* “.

From the graphs, we see that the majority of participants select “yes” , it gives a clear image that parents are aware enough to correct the pronunciation of their children when it is necessary ; besides that , the main obstacle to not being well understood backs to the way of sounds production not for any other reasons .

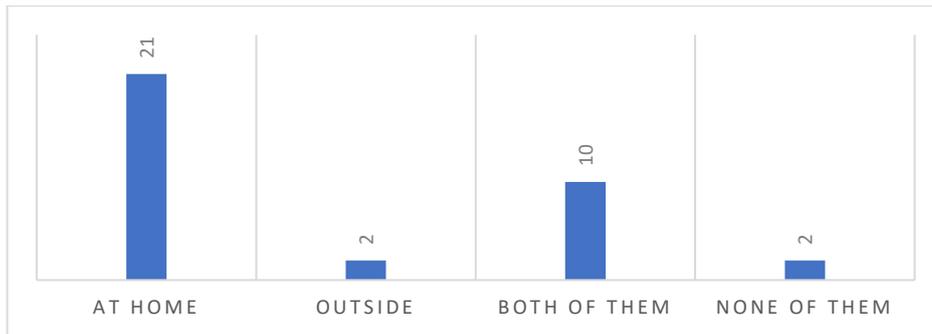


*figure 14. parents correction .*



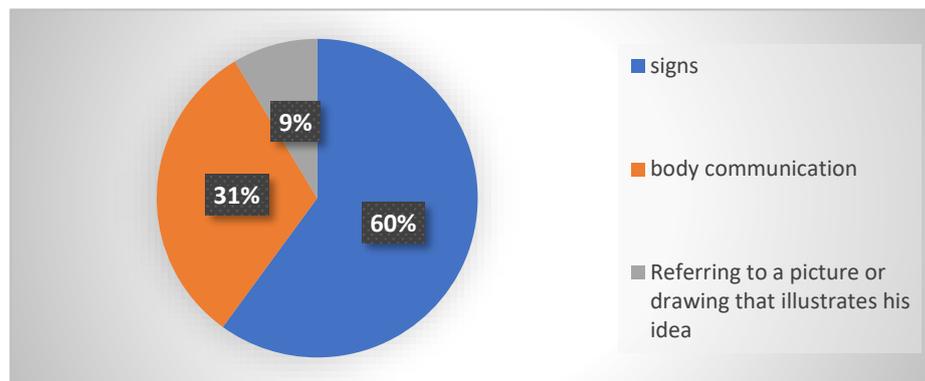
*figure 15. Child social interaction with strangers*

The fourteenth question aims to explore when did the child well communicated whether at home or outside . 21 participants answers “*at home* “and 10 said” *both* “. the others are equal 2 select “*outside* “and the 2 last ones choose” *none* “ as the chart shows bellow , here we can assert that children communicate well at home because they feels comfortable .



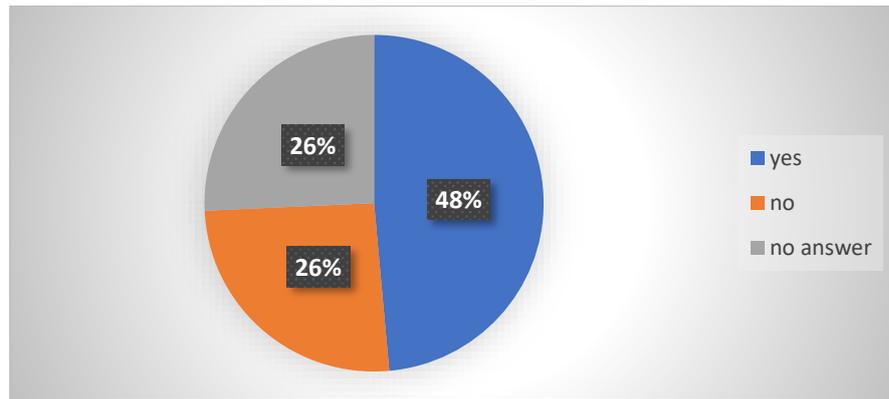
*figure 16. place of communication*

The fifteenth question as follows “ when your child stutters , what does he use to deliver his idea?” This question is a closed ended one with three suggestions .results bellow shows that the majority said that their child use “*signs* “to express his thoughts ;however, 7 participants select “*body communication* “ .



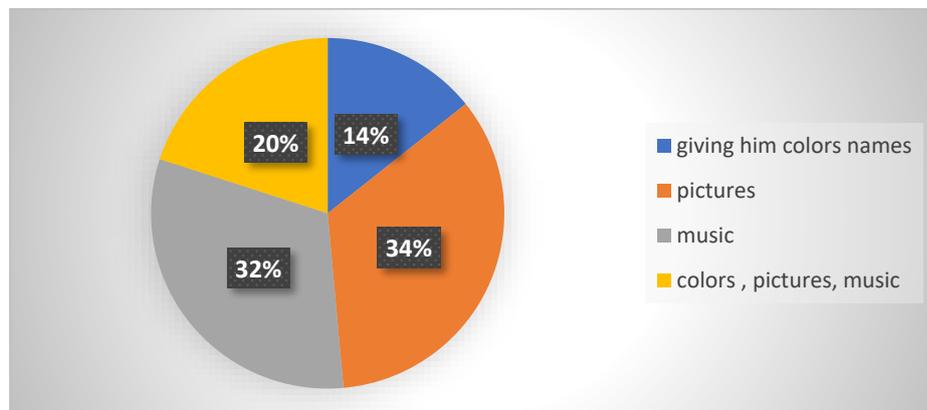
*figure 17. way of express thoughts*

The question sixteenth intends to find out if parents are satisfied from the evaluation of speech pathologist or not .48% of the number of participants said that they are satisfied from the treatment .Yet , 26% select that they are not and others 26% leave it blank .



**Figure 18. parent's satisfaction**

The last question was a closed ended one , it was posed as follow: how does your child like learning to pronounce letters? 34% answers by *pictures* , 32% said they like music and 20% like to learn by repeating colors names . Its main purpose is to give him the right treatment with taking into account what did he likes to have good results in a short time .



**FIGURE 19. TREATMENT METHOD**

## **2.7. Conclusion**

This practical section investigates “Articulation Disorders “ ,it aims to : gathering data concerning everything related with articulation disorders, and its impact on children , also to explore what kind of causes that can be behind such an impairment and to look for any possible treatment that can end or at least minimize this issue. This practical framework has presented the findings constructed by the research instrument (parent’s questionnaire) .the results shows and proves a strong connection between what mentioned previously in the literature review and our questionnaire.

# **CHAPTER THREE**

**( DISCUSSIONS &  
RECOMMENDATIONS )**

### 3. Introduction

The present study explores the reasons behind articulation disorders among children under 5 years old. It is important to briefly recapitulate the two previous chapters to move on to the third one. On the one hand, the first chapter tackles a set of concepts and previous studies to clarify the main idea of articulation disorders. On the other hand, the second chapter was a practical side to our dissertation, it gives explanations about the tools and methods used in the study. the last chapter presents a summary and short discussion of the findings, we ended it by some suggested solutions and advice to parents to raise their awareness about their children.

#### 3.1. Discussions related to the Findings

In the light of the study and according to the previous findings and discussions , it is initial to propose the following tips and recommendations to parent's .in order to deal with children in a good way for a better treatments.

✓ The results put on show that boys are the most subjected to articulation disorders rather than girls . this specific result agrees with McCarthy (1953)

**Boys have “weaker” or “slower” capacities for language acquisition .boys represent more than 70% of late talkers and just 30% of early talkers .studies on early language development (first three years of life) find systematic differences between boys and girls in the process of early communication development and language acquisition .**

✓ The study found evidences that parent's late intervention impacts negatively child's treatment chances .thus , less chances to entering school early .

✓ The results indicates that , most cases with articulation disorders produce substituted , omitted and distorted words.it also explains that the majority had a hight fever .so, we assert

that sometimes such a factor destroyed the Broca's area in the brain in which speech production takes a place.

✓ From the findings, most of the cases prefer staying isolated with their toys and a front of the TV; if it becomes a habit it leads to losing social skills. Then, speech sounds impairment.

✓ Results demonstrate that there are unusual pregnancy conditions that affect the child's brain and damage his way of talking such as high fever. So, we can consider it a dangerous problem that leads to articulation disorders.

✓ From the findings, we can say that articulation disorders was inherited it means family history can cause this disturbances in speech production .it is strongly agree with the evidence of LWEIS (2006) “ member studies of environment factors are needed to identify important influences on speech language disorder and to understand the interaction of gens” (p.305)

✓ The results demonstrates that, the majority of children prefer speaking at home more because they feel comfortable with family members even if they sometimes do not understands them clearly.

✓ An important result, home correction sessions are very beneficial for such a problem , especially if parents discover their child speech early .thus, we confirm that a lot of children can correct their pronunciation with parents help if they do not have any physiological oral disabilities or neurological one.

✓ From the findings , all of articulation disorders are misunderstood from strangers and they use signs and gestures while traying to explain something .

✓ The findings show that, parents are aware enough to see speech problems as a serious issue .so, they present their children to a speech pathologist for a better assessment .

✓ The results reveals that , learning with using modern methods as pictures , music , colors .. are very useful to attract child's attention during treatment sessions.

### **3.2. Recommendations and tips for parents**

#### **3.2.1. Before discovering child's disorder :**

- ❖ If you do not understand what he/she said, do not pretend that you did. Ask him/her to repeat if one more time just to confirm that the message is meaningful.
- ❖ Read, play, talk, and discuss with your child, 10 min per day it is beneficial to your child's social interaction it is an exercise for your child's articulatory organs.
- ❖ Discuss with other parents if you doubt that your infant suffered from an articulation disorder.
- ❖ If you are sure from your child's case, you should present him to a speech pathologist to intervene and assess him.

#### **3.2.2. After discovering child's disorder :**

- ❖ First of all; you should be patient with your child .especially if he/she has an inborn disorder (genetic or from pregnancy bad conditions ..) you must communicate with him/her the way he/she feels comfortable, by gestures, body movements, pictures ..etc. the main goal is to receive from him/her a correct message.
- ❖ Ask your infant's speech pathologist if you can practice and be a partner in your child's session, to help him/her at home .for example; you can read stories out loud with him/her its purpose is to make your child compare between both pronunciation and do a self-correction.
- ❖ Do not directly correct your child's mispronounced words and ask for repetition over times again that makes him confused and anxious . after visiting a speech pathologist , he informs you when your intervention is beneficial and positive for your kid.
- ❖ Listen carefully to your child's speech many times and compare it with others from the same age.
- ❖ Register your child in a children's nursery it helps the communicational, psychologic and academic performances.

❖ Take care and provide your infant with a healthy and peaceful environment full of positivity.

❖ Pay attention at facial expressions, body movements, gestures, and eye contact to see how deep your infant receives an input.

❖ Request is a clue to figure out what your child should reply .avoid interrupting him/her while talking and give him plenty of time to produce full and meaningful responses.

### 3.3. Limitations of the study

The study has several limitations we identified it as follow :

- Lack of resources and difficulties while gathering data.
- Since the current study should be conducted at the speech pathology clinic ,and because of the covid 19 , I obliged to stay in the quarantine rather than colleting data .
- One of my biggest problems is changing the method that I should used from ( children's observation and questionnaire to only questionnaire) .
- Most of parents refused to answering us , they just seen it as a private life .
- The translation of questionnaire from Arabic to English language was little bit difficult especially technical and medical words .
- Since Facebook was the only solution to gathering data .so, it takes about one month to gather 35 participants .

### **3.4. Conclusion**

In this chapter, we discuss our findings obtained from the research instrument (questionnaire) , in comparison of other schooler's opinions with our hypothesis. Thus , it was proved the validity of our hypothesis .we shed light on the possible risk factors behind articulation disorders .Then , we proposed several recommendations and tips for parents to an effective diagnosis . Finally, we conclude our chapter by listing the main limitations of the study .

## **General conclusion**

This Paper investigate the “Articulation disorders and its impact on children’s pronunciation”. The whole study tried to find out and examine the main reasons behind such a disability, its affects on child’s production of sounds and in what extent the early assessment is beneficial to eliminate this disorders.

It is also attempted to help parent’s by giving them suggested practical strategies to enhance their flexibility speech therapy resources and skills .importantly, to reinforce those children to accept their weaknesses as well as give them an extra positive energy to fight the obstacles that may limit their social communicative abilities.

After gathering and analyzing the data, the majority of parents responses agrees with the literature review .throughout the description of cases study, we explore that the core of causes behind articulation disorders namely: inborn ( inherited or genetic) , physiological ( hearing loss) or acquired ( unknown reasons that may came because of the negligence of parents when they leave the child make an incorrect spelling sounds without providing him with the correct form of the sound .

Therefor , articulation disorders is a disability that should be dealt with as aware as possible. And should have an image about its causes , effects and treatments , especially by parents to become more conscious about it and the health of their children. Also they should be patient and accept the fact with a broad mind . as well as providing their child with an emotional, psychological supports to reinforce his self-esteem.

The parent’s performances in the treatment process no less important than pathologists one for a better treating the infant. To conclude, we achieved the study aims and reached the answers to the research questions .Thus, we have proved the reliability of the suggested hypothesis .

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## Appendices

- Parent's questionnaire Arabic version :

### استبيان يخص أولياء الاطفال الذين يعانون من اضطراب الكلام

- تهدف هاته الاستبانة الى معرفة كيفية تقييم الاولياء لهذا النوع من الاضطرابات وفهم الصعوبات التي تواجه الاطفال لإيصال رسالة سليمة للآخرين مع مراعات نوع الاضطراب الذي يعانون منه.

1. سن أحد الوالدين:

- من 20-25 سنة
- من 26-30 سنة
- أكثر من 33 سنة

2. الجنس:

- ذكر
- أنثى

3. جنس الطفل؟

- ذكر
- أنثى

4. هل حصل طفلك على تقييم من طرف أخصائي في الكلام والنطق (طبيب ارطوفوني)؟

- نعم
- لا

5. متى اكتشفت(ي) ان طفلك يعاني من مشاكل في النطق؟

- منذ الولادة
- بعد سنة أو اثنين
- أكثر من ذلك

6. هل يوجد في العائلة شخص يعاني من نفس المشكل؟

- نعم
- لا

7. اثناء حملك هل واجهت مشاكل غير طبيعية؟

- مشاكل عادية
- اجهاد حاد في فترة الحمل
- عدوى اثناء الحمل
- مضاعفات اثناء الولادة
- حمى عالية
- اعراض أخرى

8. هل عانى طفلك من مشاكل صحية؟

- حمى فائقة
- مشاكل فيزيولوجية مثل : اعاقات في الفم
- كسور على مستوى الرأس أو مشاكل في الاعصاب
- اعراض أخرى

9. عند تواصلك مع طفلك هل تجدين صعوبة في فهم كلامه؟

- نعم
- لا
- احيانا

10. نوع الصعوبة في كلام طفلك؟

- استبدال الحروف
- حذف الحروف
- زيادة الحروف
- تحطيم الحروف في الكلمة واعادة صياغتها بطريقته الخاصة

11. ما مدى تواصل طفلك مع أطفال اخرين؟

- يتحاور بشكل عادي
  - خجول نوعا ما مع البعض
  - لا يتواصل اطلاقا يفضل اللعب والبقاء امام التلفاز
12. هل سبق وجربت عمل جلسات منزلية مع طفلك لتصحيح طريقة نطقه؟

- نعم
- لا

13. اذا تحدث غريب مع طفلك ووجد مشكلة في فهمه هل تظنين بسبب طريقته في النطق؟

- نعم
- لا
- ظروف اخرى

14. اين يتواصل طفلك جيدا؟

- المنزل
- في الخارج
- الاثنين معا
- لا يتواصل أبدا

15. عند تلغثه في الكلام ماذا يستعمل لإيصال فكرته ؟

- اشارات
- حركات بجسمه
- الاتيان بصورة او رسم
- غيرها .....

16. هل تشعرين بتحسنة بعد خضوعه لمعاينة الطبيب الارطفوني؟

- نعم
- لا

17. كيف يحب صغيرك تعلم نطق الحروف ؟

- بالالوان
- رسومات
- موسيقى
- غيرها .....

- The English version :

## Articulation disorders and its impact on children' pronunciation

A Questionnaire for parents of children with speech disorders. This questionnaire aims to know how parents evaluate this type of disorder and understand the difficulties that children face in delivering the correct message to others, taking into account the type of disorder they suffer from.

**1. Age of one of the parents**

- 20-25 years old
- 26-30 year old
- More than 33 years old

**2. what is your gender ?**

- male
- female

**3. what is your child gender ?**

- male
- female

**4. Has your child been evaluated by a speech pathologist ?**

- Yes
- No

**5. When did you discover that your child has a speech difficulty ?**

- From birth
- one or two years after birth
- more than that

**6. Is there someone in the family who was suffering from the same problem?**

- Yes
- No

**7. During pregnancy, did the mother suffer from abnormal medical problems?**

- normal problems
- severe stress during pregnancy
- infection
- complications during delivery
- hight fever
- others.....

**8. Has your child suffered from health problems?**

- Fever
- Physiological problems such as oral disabilities
- Head fractures or neurologic problems
- Hearing loss
- Nothing
- Others .....

**9. When you communicate with your child, do you find it difficult to understand his words?**

- Yes
- No
- Sometimes

**10. The type of difficulty in your child's speech is it :**

- Substitution
- Distortion
- Omission
- Addition

**11. To what extent your child communicates with other children?**

- Communicate normally
- A bit shy with some others
- He does not communicate at all

**12. Have you ever tried to correct your child's speech and do home sessions with him?**

- Yes
- No

**13. If a stranger talks to your child and finds it difficult to understand him, do you think it is because of his pronunciation?**

- Yes
- No
- Other reasons

**14. where does your child communicate well?**

- At home
- Outside
- Both
- None of them

**15. When your child stutters, what does he use to deliver his idea:**

- Signs
- Body movements
- Referring to a picture or drawing that illustrates his idea
- Others .....

**16. Do you feel better for your child after being evaluated by a speech pathologist?**

- Yes
- No

**17. How does your child like learning to pronounce letters?**

- By colors
- Music
- Pictures
- Others .....