

## **Cognitive Psychological Study of Articulatory Therapy Programs in the Context of the Coronavirus Pandemic in Algeria Dysphasia Disorder as a Model**

**Dr. Amel Amrani<sup>1</sup>, Dr. Ameer Berrabah<sup>2</sup>, Bouhadiba Hayatte<sup>3</sup>, Nennouche Soria<sup>4</sup>.**

<sup>1</sup> Abdelhamid Ibn Badis University Mostaganem, Faculty of Social Sciences, Laboratory of Quantitative and Qualitative Data Analysis for Psychological and Social Behaviors - Mostaganem University (Algeria).

<sup>2</sup> Abdelhamid Ibn Badis University Mostaganem, Faculty of Social Sciences, Laboratory of Quantitative and Qualitative Data Analysis for Psychological and Social Behaviors - Mostaganem University (Algeria).

<sup>3</sup> Specialist in Language and Communication Disorders (Algeria).

<sup>4</sup> Specialist in Language and Communication Disorders (Algeria).

**The Author's Email:** amel.amrani@univ-mosta.dz<sup>1</sup>, ameur.berrabah@univ-mosta.dz<sup>2</sup>, bouhadibahayatte@gmail.com<sup>3</sup>, sorianennouche27@gmail.com<sup>4</sup>

**Received: 05/2023**

**Published: 09/2023**

---

### **Summary of the Study:**

This cognitive psychological study aimed to investigate the role of articulatory therapy in treating dysphasia during the COVID-19 pandemic. The study focused on a sample of four randomly selected dysphasic children. A case study methodology was applied, and the research utilized the following tools: selected items from the Orientation, Judgment, and Language Test (OJL) and a custom-designed parent questionnaire. The results were subjected to quantitative analysis, revealing a decrease in the effectiveness of therapy for this specific group during the COVID-19 pandemic.

**Keywords:** Articulatory therapy, dysphasia, COVID-19 pandemic.

### **Introduction:**

Language is a social phenomenon and the most sophisticated cognitive function. It serves as a fundamental means for individuals to express their internal thoughts and ideas. It is the exceptional tool represented by a system of symbols used by a linguistic community. Language functions as a means of communication and social interaction, as Vygotsky (1985) emphasized.

Ibn al-Jinni (332 AH - 392 AH) defines language as "sounds through which every people express their purposes." Language is a crucial human characteristic, serving as a primary medium of communication that connects individuals with their communities. It is also a significant factor in intellectual growth (Khedousi, 2019).

According to Piaget, a child's linguistic development is rooted in the sensory-motor stage, where the child becomes a keen observer after the eighth month, capable of perceiving various behaviors. This enables the child to engage in imagination, mental representation, and

drawing mental maps, along with the ability to focus. These acquisitions are developed during this period through sensory inputs. Consequently, the child can create mental representations that evolve into cognitive perceptions, enabling language acquisition.

These mechanisms naturally interact and overlap in typically developing children. However, they manifest differently and appear as disorders that hinder the activation of the aforementioned abilities for automatic acquisition, leading to language disorders.

In contrast to simple language delay, which can be remedied through early intervention, dysphasia represents a delay in language development and a disruption in language structure organization that affects comprehension and production. Dysphasia is of interest to linguists, experts in neuropsychology, and cognitive scientists (Khedousi, 2019, p. 90).

Language delay involves permanent deficiencies in phonetic abilities compared to the normal standard. It is not related to hearing impairment, vocal organ abnormalities, acquired cognitive deficits during childhood, or severe emotional or psychological disturbances (Tevmonin, 2006, p. 12).

Saida Brahimi (2003), when applying the Goodglass-Good battery, found that children with dysphasia struggle with linking sentence components and often arrange these components incorrectly. They also exhibit confusion in using gender and number concepts.

Children with dysphasia face phonological difficulties at the linguistic level. Regarding their speech activities, according to psycholinguistic research (Zwobada, 1999, as cited by Khedousi, 2019), linguistically delayed children can engage in various communicative situations, exchange conversations with others, and convey their thoughts despite having a limited vocabulary.

Dysphasic children do not develop their language skills typically, and their condition is not related to a neurological processing disorder. Dysphasia is a chronic deficiency in oral language acquisition, significantly impacting communication. Early intervention is crucial in mitigating the severity of the disorder, and there are various articulatory therapy approaches tailored to the diversity of speech disorders.

Articulatory therapy is of utmost importance for children with severe disorders in both oral and written language areas. In this context, speech therapists must consider the cognitive and behavioral performance aspects of these children to provide them with the necessary assistance (Touzin, 1999).

Articulatory therapy, in general, comprises therapeutic and educational techniques aimed at rehabilitating speech skills. The ultimate goal of articulatory therapy is to reemploy distinctive capabilities and regain normal utilization (Frédérique, 1997, p125).

The process of therapy relies on the speech therapist as an integral part of a specialized and multidisciplinary team. Articulatory diagnosis is conducted through methods and approaches that vary based on the type of disorder, the age of the examined individual, and their gender. It is essential to conduct a detailed diagnosis, starting from the initial assessment, through differential diagnosis, and culminating in the final diagnosis. This comprehensive process allows the examiner to develop a tailored articulatory therapy plan (Zellal, 1997, p12).

Throughout human history, there have been various pandemics and deadly diseases that have spread fear worldwide. Each era has been marked by the outbreak of a particular pandemic, distinguished by its characteristics, transmission methods, and spread. Despite the diversity of

the causes of pandemics, their spread is often attributed to people's habits and cultures, which contribute to their wide dissemination. The novel coronavirus, known as COVID-19, is one such pandemic that has instilled fear and has had a profound impact on people's way of life (K. Slatani, 2021).

In the face of the global changes brought about by the COVID-19 pandemic, the balance of power in all economic, social, and particularly psychological and healthcare fields has shifted. This has had a significant impact on all segments of society, especially children with dysphasia, who require specialized care.

Nabil Laamouri's study in 2021 shed light on how the quality of articulatory therapy services provided to individuals was not immune to the negative impacts of the pandemic, especially during periods of lockdown. This necessitated professionals to explore alternative technological means for remote therapy that could meet the requirements of the public health situation, with the aim of optimally caring for this group.

As a result, the following questions were raised:

- \* What is the role of articulatory therapy in treating dysphasia in the period before and during the COVID-19 pandemic?
- \* Do parents play a role in the continuity of articulatory therapy during the COVID-19 pandemic?

**Hypotheses:**

- \* The COVID-19 pandemic had a negative impact on articulatory therapy for children with dysphasia.
- \* Parents play a role in the continuity of articulatory therapy in the treatment of dysphasia during the COVID-19 pandemic.

**Field Study:**

**Study Approach:** The approach employed in this study is a case study methodology.

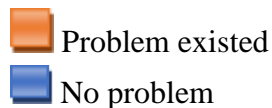
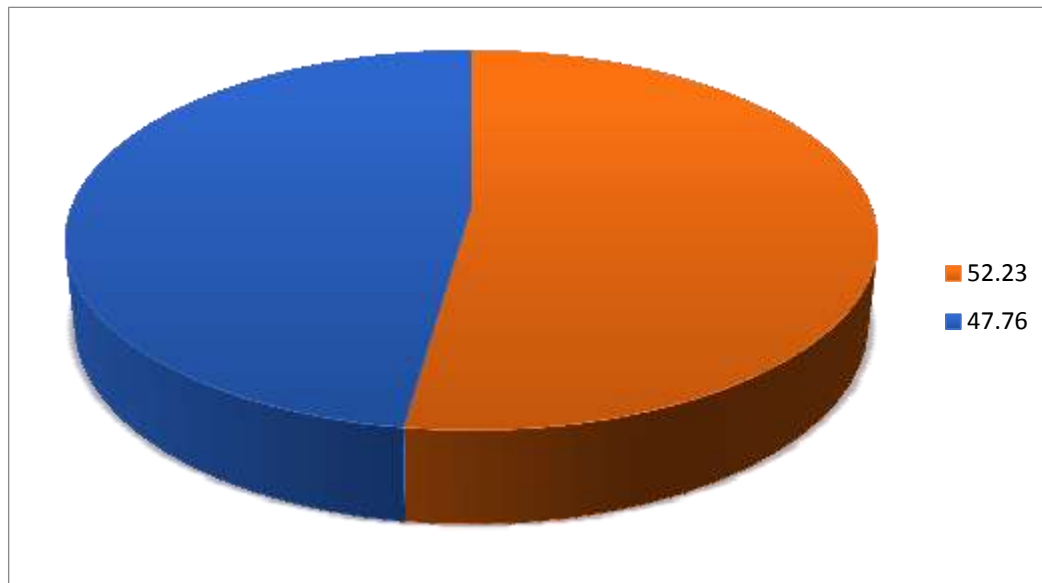
**Study Sample:** The research sample includes four cases, characterized as follows: two cases of male children and one case of a female child, all diagnosed with dysphasia. The selection of the sample was random.

**Study Tools:**

- OJL Rais Test: This test is considered an extension of the tests that measure linguistic cognitive levels. It assesses a child's written correction ability, making it specifically designed for articulatory examination needs. The test aids the examiner in discovering and identifying issues, especially at the academic level. It is administered to children between 5 to 9 years old who exhibit difficulties in handling abstract concepts, have deficits in thinking and observation, and also includes children with speech delays and profound language comprehension disorders.
- The Child's Dysphasic Rehabilitation Protocol in the Algerian Clinical Setting: Linguistic and Pragmatic, authored by Dr. Khedousi Karima.
- Questionnaire on the Role of Articulatory Therapy in Treating Dysphasia Before and During the COVID-19 Pandemic.

**Results of the Questionnaire for Each Case:****Present the questionnaire results for Case (M/F).**

	Case (M.F)	
	Problem existed	No problem
Number of responses	35	32
Percentage (%)	52.23	47.76

**Table No. 01****Document Number (01) represents the results obtained for Case (M/F).**

Through collecting information from the questionnaire, a score of (1) was assigned in cases where a problem was identified, and a score of (0) was assigned in cases where no problem was detected. After tallying the points obtained from the parents' responses:

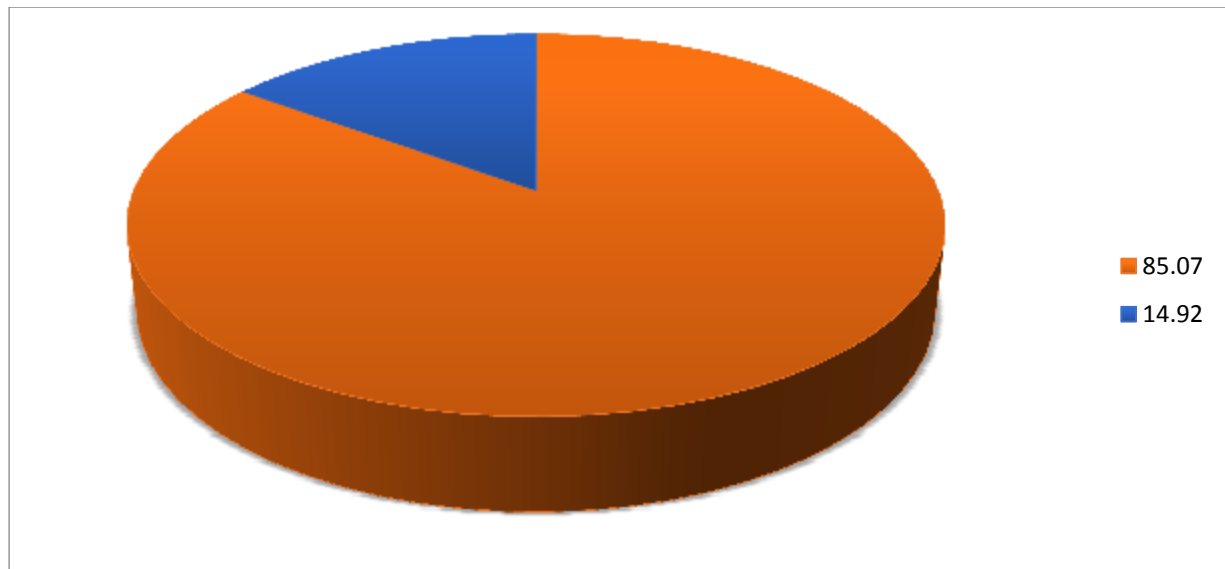
It was observed that Case (M/F) has issues, with a percentage of 52.23%, indicating a decline in their condition.

The results confirm that the COVID-19 pandemic had a negative impact, as perceived by the parents

**the results of the questionnaire for Case (H.H):**

	Case (H.H)	
	Problem existed	No problem
Number of responses	57	10
Percentage %	85.07	14.92

**Table No. 02**



**Document Number (02) represents the results obtained for Case (H.H).**

Through collecting information from the questionnaire, a score of (1) was assigned in cases where a problem was identified, and a score of (0) was assigned in cases where no problem was detected. After tallying the points obtained from the parents' responses:

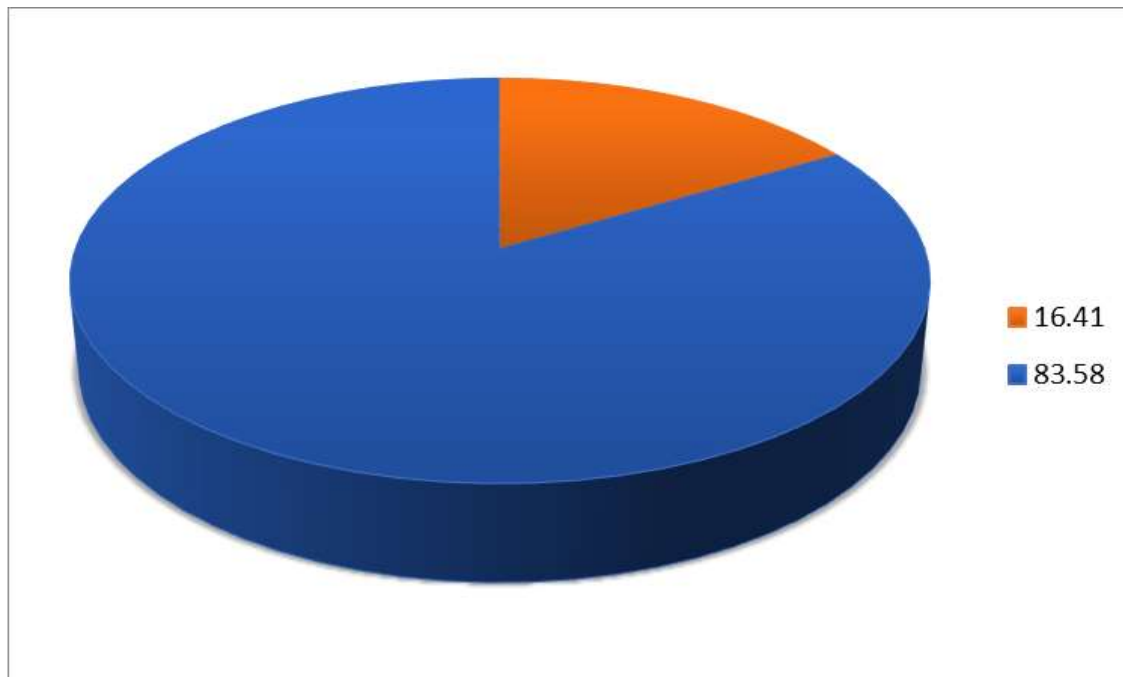
Significant issues were observed in Case (H.H), with a percentage of 85.07%, indicating a decline in their condition.

The results confirm that the COVID-19 pandemic had a negative impact, as perceived by the parents.

**the results of the questionnaire for Case (S.M).**

Duration	Case ( S. M)	
	Problem existed	No problem
Number of responces	11.	56
Percentage %	16.41	83.58

**Table No. 03**



**Document Number (03) represents the results obtained for Case (S.M).**

Through collecting information from the questionnaire, a score of (1) was assigned in cases where a problem was identified, and a score of (0) was assigned in cases where no problem was detected. After tallying the points obtained from the parents' responses:

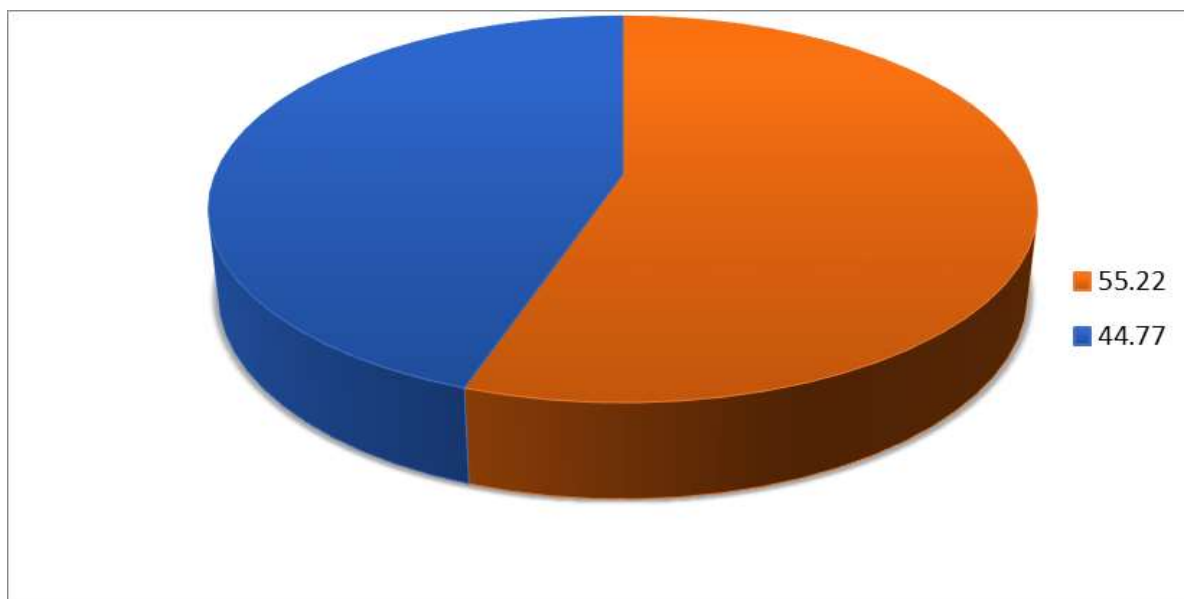
Few issues were observed in Case (S.M), with a percentage of 16.41%, indicating stability in their condition.

The results confirm that the COVID-19 pandemic had a negative impact, as perceived by the parents.

**the results of the questionnaire for Case (K.A).**

	Case (K.A)	
	Problem existed	No problem
Number of responces	37	30
Percentage %	55.22	44.77

**Table No. 04**



**Document Number (04) represents the results obtained for Case (K.A).**

Through collecting information from the questionnaire, a score of (1) was assigned in cases where a problem was identified, and a score of (0) was assigned in cases where no problem was detected. After tallying the points obtained from the parents' responses:

Few issues were observed in Case (K.A), with a percentage of 55.22%, indicating a decline in their condition.

The results confirm that the COVID-19 pandemic had a negative impact, as perceived by the parents.

From collecting the information from the questionnaires and tallying the points obtained from the parents' responses, the results were represented in the form of relative circles. It was noted that there were varying degrees of issues in the four cases, indicating a decline in their conditions during the COVID-19 pandemic, attributed to the factors mentioned earlier in Document Number (03) regarding the OJL test.

**The results confirm the hypothesis that the COVID-19 pandemic had a negative impact on articulatory therapy.**

**an overview of the therapeutic program for treating dysphasia before the COVID-19 pandemic for the cases:**

Case ( M.F)	Linguistic level results
7 years old Gender: Male Grade: Second grade elementary school Cultural Level: Intermediate Economic Level: Good of intervention: 36 months	1. Lack of use of the definite article “al” in words : - [ğal] > [arğal] - [tab] > [alkalb]  2. Non-use of verbal forms in sentences, but rather the use of isolated verbs.  3. Limited use of the object and adjective

	<p>correctly.</p> <p>4. Transformation: - The adjective [mlih] is replaced by the demonstrative noun (like this [hana]).</p> <p>5. Absence of conjunctions and relative pronouns, which shortens and automates the sentences.</p> <p>6. Lack of extended discourse due to linguistic poverty.</p> <p>7. Clear deficiency in sentence structures.</p> <p>8. Comprehension is reasonably good.</p> <p>9. Vocabulary is limited and somewhat correct.</p>
--	--

**Table No. (05):Qualitative Analysis of the Language Test Before COVID-19**

**A - Linguistic Expression:**

- This test is always conducted through spontaneous expression or naming pictures, either in meaning or with language sound distortions. The condition (M.F) has become more automatic and better prepared for oral tests.

**B - Word Naming:**

- The first set for word testing consists of 7 pictures, and the second set pertains to verbs, consisting of 5 pictures. It can be inferred that the child has become capable of naming things despite the appearance of phonetic distortions (deletions, substitutions, distortions, and additions) and the frequent use of gestures and gestures that were abundant in her language.

**C - Understanding Temporal Adverbs:**

- Answers now somewhat accurately convey the correct meaning without phonetic distortions (deletions and substitutions) that were previously a concern.

**D - Storytelling for Case (M.F):**

- The child now understands the meanings of words better and listens attentively during storytelling. However, she still struggles to retell it sequentially logically. During our assistance, she manages to recall some events with interruptions in words.

**-Qualitative Analysis of the Language Test for Case (K.A) Before the COVID-19 Pandemic.**

Case (k.A)	Linguistic Level Results
<p>Age: 7 years</p> <p>Gender: Male</p> <p>Grade: First grade elementary school</p> <p>Cultural Level: Intermediate</p>	<p>1. Lack of use of definite articles in words; all words are indefinite. Example: [qata] &gt; [alqat]</p>



<p>Economic Level: Intermediate Duration of intervention: 26 months</p>	<p>2. Failure to use verbal forms in sentences; only some verbs are used, many of which are distorted, and sometimes verbs are absent. [Σum], [aqad]</p> <p>3. Lack of verbs and difficulty using the object, except in one situation. Does not use conjunctions, adjectives.</p> <p>4. Changes: Adverb of place [hūra] is replaced with demonstrative noun (here) [hna].</p> <p>5. Lack of use of conjunctions, pronoun “I,” and adverbs, making sentences concise due to word deficiency.</p> <p>6. No clear words or short sentences, mainly due to the child’s limited vocabulary.</p> <p>7. Sentence structures are almost absent, appearing and disappearing.</p> <p>8. Comprehension is reasonable.</p> <p>9. Vocabulary is weak, distorted, and not suitable for communicative purposes.</p>
---	--

**Table No. (06) :Qualitative Analysis of the Language Test Before COVID-19**

**A - Linguistic Expression:**

This test is always conducted through spontaneous expression or naming pictures based on meaning, not phonetic language distortions. Case (k.A) suffers from problems in spontaneous speech, which is attributed to a lack of linguistic repertoire.

**B - Naming Words:**

The first series of the word test consists of 7 pictures, and the second series pertains to verbs and comprises 5 pictures. It is evident that case (k.A) is unable to name objects correctly, with phonological errors or phonetic distortions (deletions, substitutions, distortions, and additions) due to a lack of phonological awareness.

**C - Understanding Temporal Clauses:**

The case responds when asked questions related to time and can understand instructions she previously struggled with.

**D - Narrating a Story:**

Case (k.A) still struggles to understand new meanings and attempts to pay great attention while narrating the story and looking at the pictures. However, she remains unable to retell it

logically but can recall some events with word interruptions.

**-Qualitative analysis of the language test for case (H.H) before the COVID-19 pandemic.**

Case (H.H)	Linguistic level results
Age: 8 years Gender: Male Educational Level: At the psychological center Cognitive Level: Very low Economic Level: Critical Duration of Care: 36 months	1.Lack of using the definite article except in one case, for example, [almaftah]. 2.Weak verb formulation, with many distortions in the child's sentences (deletions and substitutions), for example, [maman] / [mahma]. 3.Absence of the direct object, with difficulty in using pronouns, except in one situation when calling his own name. 4.Does not use conjunctions or adjectives and relies on gestures. 5.Absence of the relative pronoun. 6.Sentence structures are absent. 7.Comprehension is somewhat correct. 8.Poor linguistic vocabulary, meaning it is 9.weak and distorted, not serving the communicative purpose.

**Table No. (07): Qualitative Analysis of the Language Test Before COVID-19 Pandemic**

**A - Linguistic Expression:**

This test is always done through spontaneous expression or naming pictures with their meanings, not phonetic distortions of language. Case (H.H) has problems with spontaneous speech, attributed to a lack of linguistic resources.

**B - Naming Words:** The first series of the word test consists of 7 images, and the second series concerns verbs, consisting of 5 images. It can be concluded that case (H.H) is unable to name objects correctly; the case relies on imitations, responding with words containing phonetic distortions (deletions, substitutions, distortions, and additions). Sometimes, there are interrupted speech sounds, reflecting a lack of phonological awareness and a limited vocabulary.

**C - Understanding Time Adverbs:** The case does not respond when asked about questions related to location, and it attempts to understand the instructions given using gestures.

**D - Narrating a Story:** Case (H.H) still struggles with understanding new vocabulary and meanings. During group sessions (imitation), the case tries to listen to the illustrated story, pay attention during class, and looks at the pictures. However, it remains unable to retell it logically. During our assistance, the case retrieves some events with interruptions in words, repeating sounds to herself.

**- Qualitative Analysis of the Language Test for Case (S.M) Before the COVID-19 Pandemic**

Case (S.M)	Linguistic Level Results
Age: 9 years Gender: Female	1. Proper use of the definite article "al" in words: [almaftah] > [almaftah], [alkalb] >

<p>Schooling: Fourth grade of elementary school</p> <p>Cultural Level: Very good</p> <p>Economic Level: Very good</p> <p>Duration of care: 36 months</p>	<p>.[alkalb]</p> <p>2. Usage of verb forms: Proper use of verbal forms, mainly within short sentences for communicative purposes.</p> <p>3. Correct use of adjectives like [chaba] and somewhat correct usage of the direct object.</p> <p>4. No phonemic transformations observed.</p> <p>5. Proper use of relative pronouns and connectors, making sentences relatively automatic.</p> <p>6. Linguistic attempts to extend discourse, due to continuous stimulation and slow but steady growth in linguistic resources.</p> <p>7. Minor errors in sentence structure.</p> <p>8. Good understanding in terms of both form and content.</p> <p>9. Continuous growth in vocabulary.</p>
--	--

**Table No. (08): Qualitative Analysis of the Language Test Before COVID-19**

**A - Linguistic Expression:**

This test is always conducted through spontaneous expression or naming pictures based on their meanings, without phonological distortions. Case (S.M) demonstrates spontaneity and a high degree of readiness for oral tests.

**B - Naming Words:** In the first series of the word test, which consists of 7 pictures, and the second series involving verbs, which consists of 5 pictures, we can conclude that the child is now capable of naming objects correctly.

**C - Understanding Temporal Expressions:** She uses gestures when asked about the location of an object, relying on imitations and gestures to indicate place.

**D - Narrating a Story:** Case (S.M) attempts to understand word meanings and pays close attention during story narration. However, she remains unable to retell it logically. With our assistance, she manages to recall some events, albeit with word gaps.

Overall, her ability to store information and her weak linguistic resources, especially in morphosyntactic structures, have regressed to dysphasia as a result of the pandemic.

**Presentation of the Results for the Dysphasia Treatment Program After COVID-19:  
- Qualitative analysis of the language test for Case (M.F) during the COVID-19 pandemic.**

Case(M.F)	Linguistic Level Results
Age: 7 years Gender: Male Educational Level: Second grade of primary school Cognitive Level: Moderate Economic Level: Good Duration of Care: 36 months	1 - Lack of definite article “al” in words [ḡaal] > [arḡal] [taba] > [alkalb]  2 - Non-use of verbal forms, instead using isolated verbs in sentences with phonological distortions.  3 - Insufficient use of direct objects and adjectives in a correct manner.  4 - Phonological distortions in transformations.  Adjective: [mlih] Demonstrative pronoun: Like this [haka]  5 - Absence of relative pronouns and links. This results in sentence simplification and automatism.  6 - Lack of discourse extension, mainly due to linguistic impoverishment.  7 - Clear deficiencies in sentence structures.  8 - Decent comprehension skills.  9- Limited and somewhat accurate vocabulary.

**Table No. (09): Qualitative Analysis of Language Test During COVID-19 Pandemic**

**A - Linguistic Expression:**

This test is always conducted through spontaneous expression or naming images here based on meaning, not phonological distortions. Case (M.F) has developed speech problems and attempts to avoid oral tests.

**B - Naming Words:** The first set of word test, consisting of 7 pictures, and the second set related to verbs, consisting of 5 pictures. It is observed that the case is still able to name objects with phonological distortions (deletions, substitutions, distortions, and additions). The case continues to use signs and gestures frequently in language. This means that the case is

still preserving the same results in the naming category.

**C - Understanding Temporal Concepts:** The case is still preserving correct answers with phonological distortions (deletions, substitutions) that were not present in the case's previous condition. The case relies on gestures in answering. The initial hypothesis is confirmed that there is a negative impact on the phonological therapy process for treating dysphasia.

**D - Narrating a Story:** The case still understands the meanings of words and listens attentively during story narration. However, the case remains unable to reproduce them in a logical sequence. During our assistance, the case did not recall some events. The initial hypothesis is confirmed that there is a negative impact on the phonological therapy process for treating dysphasia.

#### **Summary of Case (M.F) During COVID-19:**

**The case (M.F)**, after 36 months of speech therapy and following a hiatus during the quarantine period due to COVID-19, exhibited a form of automatism in speech, accompanied by anxiety and stress. The case still experienced phonological distortions that were previously present in their language. They relied heavily on imitations and gestures, which they had previously surpassed. The child's language skills in terms of morphosyntactic structures remained poor.

There was limited progress in understanding concepts of time and space, and the case showed increased anxiety. The case remains in the rehabilitation process while in the primary stage. Their language level remains stable, which can be attributed to their developmental language disorder.

**The hypothesis that there is a negative impact on the process of phonological treatment in the management of developmental language disorder during the COVID-19 pandemic was confirmed.**

**Results Analysis:** There was a slight decline in the case's verbal communication skills during the COVID-19 period, but their comprehension remained intact.

Our study findings align with those of Sihila Bouakaz's study, which indicated that the pandemic in Algeria and the quarantine measures posed significant challenges to the routine of speech therapy sessions. This especially affected the scheduling of therapeutic sessions, particularly during the initial months when the COVID-19 pandemic spread alarmingly and disrupted the therapy of numerous individuals.

Our study also supports Sihila Bouakaz's assertion that it is necessary to present an alternative image of speech therapy and not limit it to office-based assessments. It highlights the importance of utilizing scientific television technology to address the concerns of individuals during periods when therapy sessions are interrupted. These insights have led to the adoption of strict preventive measures in the process of phonological therapy, ensuring the continuity of treatment during the pandemic.

#### **Analysis of the Qualitative Language Test for Case (K.A) During the COVID-19 Pandemic.**

Case (k.A)	Linguistic level Results
Age: 7 years Gender: Male Grade: First grade elementary school	1 - Lack of definite articles in words; all words are indefinite. Example: [qata] > [alqat]

<p>Cultural level: Average Economic level: Average Duration of sponsorship: 26 months</p>	<p>2 - Lack of verbal forms in sentences, only some verbs are used, often with distortions, and sometimes verbs are absent. [Σum], [aqad]</p> <p>3 - Absence of verbs and difficulty in using the passive form except in one situation. Doesn't use linking words or adjectives.</p> <p>3 - Substitutions: Place adverb [hūra] is replaced with a demonstrative noun (here, [hna]).</p> <p>5 - Lack of the use of conjunctions, pronoun "I," and place adverbs. This leads to short sentences due to a lack of vocabulary.</p> <p>6 - No clear words or short sentences, attributed to a limited vocabulary.</p> <p>7 - Sentence structures are nearly non-existent; they appear and disappear.</p> <p>8 - Comprehension is acceptable.</p> <p>9 - Linguistic vocabulary is weak, distorted, and does not serve the communicative purpose.</p>
---	--

**Table No. (10): Qualitative Analysis of Language Test During the COVID-19 Pandemic**

**A - Linguistic Expression:**

This test is always conducted through spontaneous expression or naming pictures based on meaning, not phonological distortions. Case (K.A) is experiencing difficulties in the spontaneity of speech, attributed to a deficit in linguistic resources.

**B - Naming Words:**

The first set of the word test consists of 7 images, and the second set is related to verbs, containing 5 images. It can be deduced that case (K.A) is unable to correctly name objects, as it is accompanied by phonological errors or what is called phonological distortions (deletions, substitutions, distortions, and additions). This is attributed to a lack of phonological awareness in the case.

**C - Understanding Temporal Adverbs:**

The case responds when asked questions related to place, and can understand instructions that she had problems with previously.

**D - Narration of the Case's Story (K.A):**

The case still struggles to understand new meanings and tries to listen attentively while narrating the story and looking at the pictures. However, she remains unable to repeat them logically, but with our assistance, she manages to recall some events with interruptions in words.

**The initial hypothesis that there is a negative impact on the Articulatory Phonology intervention process in treating Developmental Dysphasia is confirmed.**

**Case Summary (K.A):**

The initial hypothesis that there is a negative impact on the Articulatory Phonology intervention process in treating Developmental Dysphasia is confirmed.

After 26 months of Articulatory Phonology intervention, case (K.A) developed motivation and a form of speech characterized by phonological errors. We noticed a significant decrease in phonological distortions that she previously used in her language. Case (K.A) still relies on gestures and signals she used before. Concepts of time and place have remained stable but appear intermittently. The case's performance is low. She is still in the rehabilitation process, in the primary stage, with linguistic levels being stable, attributed to Developmental Dysphasia.

**Qualitative Analysis of the Language Test for the Case During the COVID-19 Pandemic (H.H)**

Case ( H.H)	Linguistic Level Results
Age: 8 years Gender: Male Educational Level: At the psychological center Cultural Level: Very low Economic Level: Critical Duration of Care: 36 months	1. Lack of using the definite article except in one case, for example, “the key” [almaftah]. 2. Strong deficit in verb formation; the child’s sentences contain many phonological errors (deletions and substitutions), for example, “maman” instead of “mahma.” 3. Absence of a direct object and difficulty in using the nominative case, except in one instance when addressing him by name. 4. Does not use linking words or adjectives, but relies on gestures and uses signs. 5. Absence of the pronominal object. 6. Structures are practically non-existent; they do not appear. 7. Comprehension is almost accurate. 8. Vocabulary is deficient, distorted, and does not serve the communicative purpose effectively.

**Table No. 11: Qualitative Analysis of the Language Test During the COVID-19 Pandemic**

**A - Linguistic Expression:**

This test is always conducted through spontaneous expression or naming of images, focusing



on the meaning without phonological distortions. Case (H.H) experiences issues with the spontaneity of speech, which is attributed to a lack in linguistic resources.

#### **B - Naming Words:**

The first set of the word test consists of 7 pictures, and the second set concerns verbs and contains 5 pictures. It can be concluded that case (H.H) is unable to name objects correctly and relies on gestures. Responses often contain phonological errors (deletions, substitutions, distortions, and additions). Sometimes, there are pauses in speech. This is attributed to a lack of phonological awareness and a limited vocabulary.

#### **C - Understanding of Temporal Context:**

Case (H.H) does not respond when asked questions related to location, and she attempts to understand instructions given with gestures.

#### **D - Narrating a Story:**

Case (H.H) still struggles with comprehending new vocabulary and meanings. She attempts to listen to illustrated stories and pays attention during group sessions (imitation). While narrating the story and looking at the pictures, she remains unable to retell it logically. However, with our assistance, she retrieves some events with interruptions in words and sometimes repeats the same sounds.

#### **Summary of Case (H.H):**

After 36 months of phonological intervention, Case (H.H) still faces challenges in spontaneous speech. There is a severe lack of vocabulary, accompanied by phonological errors. Her language remains weak, and she relies on gestures and signs as she did before. Concepts of time and place are still underdeveloped, showing inconsistency. There is a critical deficiency in her linguistic dictionary. Lack of parental awareness, neglect, the age of the case, and a lack of seriousness in continuing rehabilitation are common factors hindering her progress. Communication problems in direct verbal interaction persist. She is still in the rehabilitation process, located in the psychopedagogical center. Her language remains stable, attributed to the dysphasia disorder.

The initial hypothesis that there is a negative impact on the phonological intervention process in treating dysphasia is confirmed.

#### **Qualitative Analysis of the Language Test for Case (S.M) During the COVID-19 Pandemic**

Case (S.M)	Linguistic Level Results
Age: 9 years Gender: Female Currently in the fourth grade of elementary school Cultural level: Very excellent Economic status: Very excellent Duration of care: 36 months	1. Usage of Definite Articles "Al" in Words: - The use of definite articles is correct in words like "almaftah" and "alkalb."  2. Usage of Verbal Forms: - Verbal forms are used, but primarily within short sentences that serve the communicative purpose.  3. Proper Use of Adjectives: - Adjectives are used correctly, such as



	<p>“chaba.” The use of the object complement is somewhat appropriate.</p> <p>4. Phonemic Transformations:</p> <ul style="list-style-type: none"> <li>- There are no phonemic transformations observed.</li> </ul> <p>5. Adverbial Use of the Word “Mlih”:</p> <ul style="list-style-type: none"> <li>- The word “mlih” is used as an adverb (like “haka”), indicating correct usage in expressing place.</li> </ul> <p>6. Relative Pronouns and Pronouns Usage:</p> <ul style="list-style-type: none"> <li>- Relative pronouns and pronouns are used properly. This shortens sentences and makes them somewhat automatic.</li> </ul> <p>7. Linguistic Attempts for Speech Extension:</p> <ul style="list-style-type: none"> <li>- There are linguistic efforts to extend discourse. This is due to continuous stimulation and slow but steady growth in linguistic resources.</li> </ul> <p>8. Minor Errors in Sentence Structure::</p> <ul style="list-style-type: none"> <li>- Some minor errors are present in sentence structures.</li> </ul> <p>9. Correct Comprehension of Form and Content::</p> <ul style="list-style-type: none"> <li>- Comprehension in terms of both form and content is accurate and acceptable.</li> </ul> <p>10. Continuous Vocabulary Growth:</p> <ul style="list-style-type: none"> <li>- Vocabulary continues to grow.</li> </ul>
--	--

**Table No. 12: Qualitative Analysis of Language Test During the COVID-19 Pandemic**

**-Narrative:**

Child (S.M) has become capable of understanding the meanings and vocabulary of the story, following its events, but her ability to narrate the story herself has changed. This indicates an inability to store information and a weakness in linguistic resources, which has regressed to a disphasic disorder.

**-Chronological Understanding:**

Answers have become almost entirely correct without phonemic distortions (deletions and

substitutions) that the child used to struggle with. However, she has acquired minor problems related to understanding time and place, suggesting that she consistently faces difficulties with complex sentences.

**Summary:**

In the word labeling test, there is some improvement in the use of definite articles in words, while verbs have shown significant improvement. Child (S.M) has notably enhanced her expressive linguistic skills, with an increased vocabulary and correction of some phonemic distortions that were previously problematic.

**The partial hypothesis that parents play a role in the continuity of speech therapy during the COVID-19 pandemic has been confirmed.**

**Conclusion:**

Oral language development in children has witnessed significant progress since 1970, with the proliferation of research in the fields of psychology, linguistics, neuroscience, and genetics. Addressing language disorders has become an area of interest for researchers and scientists. The main objective of this study was to enrich the knowledge in this field due to the scarcity of scientific research in this area.

Dysphasia is a developmental disorder that affects oral and linguistic production and comprehension. It is a specific, profound, and enduring disorder that directly impacts a child's cognitive and intellectual development. Early intervention in the speech therapy process is necessary to mitigate the long-term effects of this disorder.

Speech therapy relies on several guidelines to ensure its successful progress. However, these guidelines were disrupted by exceptional circumstances, such as the COVID-19 pandemic, which disrupted the schedule of speech therapy sessions and posed a barrier to continued treatment.

This study aimed to understand the role of speech therapy in treating dysphasia before and during the pandemic, from a cognitive perspective. This was achieved by surveying parents and administering various tests related to oral linguistic comprehension and production to a sample of four individuals with dysphasia. The results showed varying scores for each case (M.F, H.H, K.A, S.M) with different percentages (52.23%, 85.07%, 16.41%, 55.22%). These results confirmed that children with dysphasia face challenges from the parents' perspective.

The results of the OjL test revealed varying scores for the four cases, with M.S achieving the highest score at 66% and H.H the lowest at 10%.

These results highlight the role of economic and cultural factors in the success of speech therapy, supporting the hypothesis that "the COVID-19 pandemic had a negative impact on speech therapy for children with dysphasia."

With technological advancements, it is important to consider rebuilding and redesigning a rehabilitation model that aligns with current circumstances, such as the COVID-19 pandemic. The program should be rich with new tools that are in tune with the times and enable children with dysphasia to continue their cognitive development, overcome obstacles, and tackle the challenges faced by both the examiner and the examined.

Speech therapists work on strengthening and reinforcing the strengths of the examined individual, developing their weak performance abilities, and introducing alternative tools to facilitate the rehabilitation process and communication with the examined person, such as the

use of educational television.

**References:**

- Ibrahim Faraj Abdullah Al-Raziqat (2018), Speech and Language Disorders (Diagnosis and Treatment), Fourth Edition, Jordan, Oman.
- Abu Shakhddham, Khawla Awad, Sahar Salem, Shadi Nour, Abdullah (2020). The Effectiveness of E-Learning in the Face of the Spread of the Coronavirus, Journal of Studies in Social Sciences, Volume (03), Issue (4), pp. 80-99.
- Ismail Hassan (2020), Research Methodology, Lectures for Master's Students, University of Algeria 1.
- Al-Hamri, Mufaq Mohammed Adnan Abd al-Jabbar, Al-Mufi, Amin Ahmed Mahboub (2011): Al-Manarat Journal for University Studies, Volume (03), Issue (02), pp. 20-29.
- UNICEF (2020): Principal Messages and Activities for Preventing and Controlling COVID-19 in Schools.
- Amin Janan, Samira Rikza (2018): An Introduction to Articulatory Phonology, Oman, Bridges for Publishing and Distribution.
- Awaibeh Saleh, Al-Qasim (2020): Evaluating the Experience of Distance Learning in the Face of the Coronavirus from the Students' Perspective, Journal of Humanities and Social Sciences Studies, Volume (26), Issue (03), pp. 133-159.
- Bouabdellah Belqasmi, Maoudi Mohammed (2021): The Impact of COVID-19 Pandemic on the Psychological Quality of Primary School Teachers, A Field Study in Mostaganem Province, Human Resource Development Journal, Volume (16), Issue (03), pp. 233-258.
- Hassan Mandil Hassan (2021): The Pandemic in the Arabic Dictionary, Al-Kalam Journal, Volume (06), Issue (01), pp. 17-47.
- Hussein Nuwani (2018): Articulatory Phonology and the Arabic Language (An Introduction to the Science of Speech Disorders), Algeria, Dar Al-Khaldoonia for Publishing and Distribution.
- Saleh Hassan Al-Dahri (2005): General Psychology, Fourth Edition, Egypt, Islamic Heritage Library for Publishing and Distribution.
- Safia Boufassa (2007): Lecture on Articulatory Phonological Tools, Al-Rawayas Journal, Volume (05), Issue (01), pp. 297-312.
- Abdul-Basit Hassan (1980): Principles of Social Research, Egypt, Cairo, Wahba Library for Publishing and Distribution.
- Abdul Razzaq Al-Dulaimi (2013): Public Relations and Crisis Management, Second Edition, Beirut, Al-Yazouri Scientific Publishing and Distribution.
- Abdel-Monem Radwan (2016): E-Learning Platforms (Online Educational Materials), Egypt, Cairo, Dar Al-Ulum for Publishing and Distribution.
- Fatiha Belazouz, Nasr al-Din Jabbar (2020): The Problem of Differential Diagnosis between Autism Spectrum Disorder and Language Disorders, Journal of Research in Humanities and Social Sciences, Volume (04), Issue (12), pp. 11-21.
- Fawzi Abdullah Al-Aksh (1975): Scientific Research (Methods and Procedures), United Arab Emirates, Al-Ain, Department of General Administration for Publishing and Distribution.
- Karima Khadousi (2019): Developmental Language Disorder, Oman, Osama House for

Publishing and Distribution.

- Karima Saltania (2021): Social Interaction in Times of Crisis (A Model of the Coronavirus Pandemic), Master's Thesis, Faculty of Social and Human Sciences, 8 May 1945 University, Guelma.
- Latifa Qaaïd (2020): Management of Medical Waste during the COVID-19 Pandemic, Journal of Economic Studies and Research on Renewable Energies, Volume (07), Issue (02), pp. 76-96.
- Muhammad Hulah (2007): Acquired Child Aphasia, Beirut, Hume Publishing House and Distribution.
- Munir Mareef (2020): Mental Security in the Time of the COVID-19 Pandemic and Its Relationship to Job Performance, Manarat Journal for Social Science Studies, Volume (03), Issue (02), pp. 181-267.
- Mahdi Kazem (2021): The Reality of Distance Education in Iraqi Universities in the Face of the Coronavirus from the Students' Perspective, Completion of Master's Degree Thesis, Faculty of Educational Sciences, Middle East University, June, Iraq.
- Najia Tiqamunin (2006): Oral Language between Acquisition in Children with Developmental Language Disorder and Retrieval in Incarcerated Individuals, Master's Thesis in Articulatory Phonology, Faculty of Social and Human Sciences, University of Algiers 1, Algeria.
- Huda Al-Muzquri (2021): Virological, Epidemiological, and Evolutionary Rules (COVID-19), Doctoral Thesis in Medicine, Faculty of Medicine, Ibn Sina University, Marrakech, Morocco.
- Yusuf Qatami (2020): Cognitive and Linguistic Child Development, Jordan, Al-Ahliyya for Publishing and Distribution.

**The French references :**

- Brin.F et al .(2011). Speech Therapy Dictionary. France. Third edition. Ortho Edition.
- Bozkurt et al. (2020). A global outlook on the interruption of education due to the COVID-19 pandemic. Navigating in a time of uncertainty and crisis. Asian Journal of Distance Education, 15, P: 1-26.
- Nacera ZELLAL. "Developmental Dysphasia, a Matter of Clinical Psycholinguistics." Vouloir No. 05. Mixed Activities, Algiers, 2005.
- Piaget.J. "The Birth of Intelligence," PUF, Paris, 1976.
- Pialoux. (1975) "Child Psychology," Masson Editions, Paris.
- Sahu.P. (2020). Closure of Universities Due to Coronavirus Disease (COVID-19). Impact on Education and Mental Health of Students and Academic Staff, Medical Education and Stimulation. Centre for Medical Science Education. The University of the West Indies, Saint Augustine, TTO.
- Touzin, Monique. (1999). Phonological Awareness, Speech Therapy Rehabilitation.