

Level of Phonological and Functional Performance of Oral Language among Educable Mentally Retarded Children- Field Study at the Psycho- Pedagogical Centre for Mentally Disabled Children No. 01 - Martyr Al-Muqran Ali in the province of M'sila

مستوى الأداء الفونولوجي والوظيفي للغة الشفهية عند الأطفال المتخلفين ذهنيا القابلين للتعلم
بولاية دراسة ميدانية بالمركز النفسي البيداغوجي للأطفال المعوقين ذهنيا رقم 1 الشهيد المقران علي-
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- Abstract: The present study aimed to identify the levels of phonological and functional performance skills in oral language among children with educable intellectual disabilities. The study was conducted on a sample of three cases of children with educable intellectual disabilities at the Psycho-Pedagogical Centre for Mentally Disabled Children No 01 in the province of M'sila. Accordingly, a descriptive case-study methodology was adopted, utilizing the Chevrie- Muller Test to assess oral production in children with intellectual disabilities. After conducting the field study and collecting, tabulating, and analyzing the data both quantitatively and qualitatively, the results revealed a clear delay in oral language development across various levels: phonetic, lexical, syntactic, and semantic. Additionally, the cases suffer from speech disorders characterized by substitution and omission, which affect speech clarity and lead to difficulty in being understood by others. Furthermore, their lexical repertoire is limited compared to their chronological age, relying on simple and repetitive vocabulary with a weakness in using abstract concepts. Moreover, the sentences produced by the cases show a simple grammatical structure, characterized by the absence of conjunctions and occasional poor word ordering.

- Keywords: Educable Mentally Retarded Children (EMR) - Functional Performance - Oral Language, Phonological Performance.

- الملخص: هدفت الدراسة الحالية إلى معرفة مستوى الأداء الفونولوجي والوظيفي للغة الشفهية لدى الأطفال المتخلفين ذهنيا القابلين للتعلم، حيث أجريت الدراسة على عينة تتكون من ثلاث حالات من الأطفال يعانون من تخلف ذهني قابلين للتعلم بالمركز النفسي البيداغوجي للأطفال المعوقين ذهنيا رقم 1 - بولاية المسيلة. ولتحقيق أهداف الدراسة تم اعتماد المنهج الوصفي القائم على دراسة الحالة، فقد تم تطبيق اختبار شوفري ميلر لتقييم الإنتاج الشفهي عند الأطفال المتخلفين ذهنيا. وبعد إجراء الدراسة الميدانية وجمع البيانات والمعلومات وتبويبها

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ومعالجتها كمياً وكيفياً، تم التوصل إلى نتيجة مفادها تأخر واضح في تطوّر اللغة الشفهية، يمسّ مختلف مستوياتها: الصوتي، المعجمي، التركيبي والدلالي، بالإضافة إلى أن الحالات تعاني من اضطرابات في النطق يتمثل في الإبدال والحذف، مما يؤثر على وضوح الكلام وصعوبة فهمهم من قبل الآخرين، كما أن الرصيد المعجمي محدود مقارنة بعمرهم الزمني، حيث تعتمد على مفردات بسيطة ومكررة، مع ضعف في استخدام المفاهيم المجردة. كما أن الجمل التي تنتجها الحالات تظهر بنية نحوية بسيطة، مع غياب أدوات الربط وسوء ترتيب الكلمات أحياناً.

- الكلمات المفتاحية: اللغة الشفهية، الأداء الفونولوجي، الأداء الوظيفي، الأطفال المتخلفين ذهنياً القابلين للتعلم.

- Introduction:

Intellectual disability is considered as a state of impaired mental growth, manifested by a person's weak ability to adapt to the requirements of their environment, making them in constant need of support and assistance. This condition negatively affects a range of their mental abilities, particularly abstract, analytical, and linguistic abilities, where linguistic difficulties are proportional to the degree of disability; they range from speech delay and poor linguistic repertoire to the point of complete inability to speak in severe cases (Al-Yasiri, 2006). This phenomenon has received steady international attention, driven by the necessities of civilizational development on one hand, and the exacerbation of its prevalence rates and its worrying repercussions on the other hand, and based on a firm conviction concerning persons with disabilities to live a dignified life, learn, and adapt- a principle confirmed by human rights charters and the principles of equality and equal opportunity (Yahya and Obeid, 2005).

Language occupies a central position at the heart of studies of human abilities as a complex semiotic system, formed within specific cultural and social frameworks, and subject to an integrated system of phonological, morphological, syntactic, and semantic rules. This structural system represents the primary tool of communication and interaction for humans. Functionally, language is classified into two integrated paths: Receptive Language, represented by mental processes that depend on the brain's ability responsible for decoding linguistic codes and analysing sensory stimuli; and Expressive Language, which deals with productive capacity through formulating ideas and converting them into meaningful linguistic outputs via motor channels.

In the same context, to understand the true magnitude of the challenge represented by intellectual disability, the importance of statistical data emerges. World Health Organization reports indicate that the disability rate in general is close to 10% in developing countries, while it rises to 13% in some contexts. The number of people with intellectual disabilities globally is estimated at about 150 million people, i.e., about 3% of the world's population, with the highest percentages concentrated in third-world countries (WHO, 2000). Locally in Algeria, statistics from the Ministry of National Solidarity (2012) show the presence of approximately 1,975,000 people with disabilities, including about 167,000 suffering from intellectual disability of varying degrees. This global and local interest has resulted in numerous researches and studies that helped identify the causes of disability and ways to prevent it, and provided appropriate educational and training methods, confirming the continuous need to intensify scientific, educational, and social efforts to support and empower this group (Salman Sarah, 2014).

1-ProblematICS:

Language represents the most complex communicative system in expressing ideas, feelings, and emotions, and it is the mechanism that gives the individual the ability to interact interpersonally and understand the internal essence of others. The function of language goes beyond being an expressive tool to become a reflector of psychological needs and motives, and a primary driver for developing cognitive and psychological skills and abilities. Functionally, language is embodied in two patterns: verbal and non-verbal (which includes gestures and signs), where these patterns are linked in a reciprocal relationship between Receptive Language as a mechanism for comprehension and Expressive Language as a tool for production.

From a procedural standpoint, two pivotal terms are related to the concept of language: Speech, which is the organizational ability to form sounds within the verbal linguistic framework, and Articulation, which refers to the mechanical and motor processes of the speech apparatus during sound production. In its essence, language is

defined as a semiotic system of symbols and rules socially agreed upon, aiming to transmit information and exchange ideas within a communicative context that requires a sender and a receiver.

The child's language acquisition follows a regular developmental path and within psychologically expected stages despite the complexity of the linguistic structure. This is a result of the intersection of a set of environmental variables, cognitive abilities, and physiological maturity. Linguistic and communicative skills acquire strategic importance in early childhood, specifically during the first five years, as they are the (critical period) for acquisition. Linguistic competence- represented in building a vocabulary and employing it correctly- is a central pillar for academic learning and the acquisition of life experiences, in addition to its fundamental role in promoting cognitive, emotional, and social growth, and achieving adaptation to the changing requirements of the surrounding environment.

Language acquisition relies on mental abilities that enable the individual to cognitively process Auditory Processing and select spoken vocabulary according to their semantic contexts. Accordingly, a noticeable variation appears in the verbal communication abilities of children with intellectual disabilities compared to their typically developing peers. This discrepancy is attributed to deficiencies in higher cognitive functions related to language, particularly in the stages of Central Processing and mental representation that take place in the brain, which are the main driver for producing and organizing speech.

Ozanne & Krimmer (1990) attribute the observed deficiency in linguistic skills among those with intellectual disabilities to its association with limited cognitive and perception abilities, in addition to a deficiency in Sensorimotor performance, which reflects negatively on linguistic skill and causes stumbling in articulatory outputs and an increased frequency of linguistic errors. In a related context, Gardner (1978) confirmed that educable children with intellectual disabilities show very slow rates in acquiring linguistic skills, with a clear developmental gap compared to their typically

developing peers; this necessitates the design and intervention of procedural training programs aimed at enhancing functional communication skills between them and those around them.

In his study supporting the above, Al-Rousan (2000) indicated that linguistic disorders among those with intellectual disabilities manifest in a range of clinical signs, including Articulation Disorders represented by the difficulty of forming Phonemes, and speech fluency disorders such as excessive speed or atypical inter-pauses, in addition to a decrease in the level of Audibility and a deficiency in the linguistic repertoire. Al-Rousan emphasizes the existence of a direct correlation between the severity of these disorders and the degree of mental disability; the more severe the intellectual deficiency, the more the linguistic performance gap worsens (Al-Rousan, 2000, p. 78).

Linguistic performance in people with intellectual disabilities is considered an overlapping disorder that combines phonological and functional performance skills. On the phonological side, clear difficulties appear in distinguishing sounds, organizing them, and pronouncing them accurately, which directly affects the clarity and stability of speech. This phonological deficiency results in a tangible impact on the functional level of language, as the individual's ability to use language in daily situations to express their needs, social interaction, and understanding the communicative context decreases. Furthermore, the weakness of the phonetic structure leads to a decrease in speech initiative, driving some disabled individuals to rely on alternative communication methods, which hinders the development of the functional efficiency of the language.

Based on this, language in the educable intellectually disabled person is viewed as an integrated system in which phonological difficulties interact with functional deficiency, which requires educational and therapeutic interventions that take into account the development of both aspects together (Qadri, 2015, p. 91). The "Spradlin" study showed that the most common linguistic problems among the mentally

handicapped consist of articulation difficulties, lack of vocabulary, and weak construction of linguistic rules, in addition to clear observations of phenomena of deletion, reversal, and articulatory substitution of sounds, and the overlapping of syllables in speech. Consequently, language for the intellectually disabled becomes an obstacle that limits their ability to express their needs, inclinations, and feelings (Ben Arabia et al., 2016, p. 185).

Oral language disorders constitute a fundamental part of clinical practices in the field of Orthophonics (Speech Therapy). The importance of early screening for these disorders emerges as an urgent necessity to ensure the provision of appropriate therapeutic interventions in their early stages. Accordingly, the problem of the study centred on the following question:

What is the level of phonological and functional performance skills of oral language among educable children with intellectual disabilities at the Psychopedagogical Centre for Mentally Handicapped Children No. 01 in M'Sila?

2-Significance of the Study:

This study contributes to enriching the scientific balance in the field of diagnosing and evaluating oral language, especially phonological and functional performance among educable children with intellectual disabilities.

It enables a deeper understanding of the characteristics of this category and identification of the most prominent difficulties and problems they face at the level of verbal communication.

It highlights the importance of early intervention in improving linguistic abilities and the extent to which the child with intellectual disability responds to language stimulation strategies.

The results of this study can be relied upon as a field contribution for the benefit of specialists in Orthophonia and practitioners in special education centres, speech therapy clinics, or educational schools.

3-Objectives of the Study:

The study aims to:

- Detect the level of phonological performance (naming and repetition) of oral language among educable children with intellectual disabilities at the Psycho-pedagogical Centre for Mentally Handicapped Children No. 01 in the province of M'sila.
- Detect the level of functional performance of oral language among educable children with intellectual disabilities at the Psycho-pedagogical Centre for Mentally Handicapped Children No. 01 in the province of M'sila.

4-Study Terms:

4-1/Oral Language: It is a basic means of communication between two people, where interaction takes place according to a specific system using integrated psychological, neurological, and motor abilities. Oral language includes two interconnected aspects: the linguistic production aspect and the cognitive comprehension aspect of language. Among children with mild intellectual disability, their oral production skills are measured through the application of the **Chevrier Muller** battery, which evaluates the phonological performance (naming and repetition) and functional (or articulatory) performance of the language.

4-2/Children with Intellectual Disabilities: They are children suffering from mild intellectual disability located at the Psych pedagogical Centre for the Mentally Handicapped No. 01 in M'sila, called "Chahid Mokrane Ali," for the academic year 2024-2025, whose ages range from 11 to 13.

5-Literature review:

5-1/Study by Messaoud Houichi and Dalila Adda (2023): Entitled "The Reality of Applying Adapted Oral Language Assessment Tests in the Algerian Environment from the Orthophonic Practitioner's Perspective". The study aimed to reveal the reality of implementing adapted oral language assessment tests in the Algerian context from the perspective of speech-language pathologists (SLPs). A descriptive approach was adopted, utilizing a questionnaire that measured five key areas: training on application

methods, the assessment of primary aspects of oral language tests, determining the extent of their use and effectiveness in screening, evaluation, and diagnosis, and their ability to determine the linguistic capabilities of examinees compared to the normative sample.

The study tool was applied to a sample of 36 practitioners across both the public and private sectors. The study concluded that a variety of oral language tests measure only one or two linguistic levels of the test items. Furthermore, a significant percentage of specialists did not receive training on how to administer adapted oral language tests, and the majority of practitioners use the ELO, MT86, and O52 tests, as they are the most commonly used.

5-2/Study by Julie GUILLAUD (2023): Entitled "Investigation and Prevention of Oral Language Disorders among Children from Birth to 6 Years- A Systematic Normative Review of Scientific Articles. This study aimed to monitor and review the tools used in assessing oral language in children from birth to age six, while extracting specific testing tasks that allow for the detection of language disorders. To achieve this, a Systematic Review methodology was adopted to synthesize recent evidence-based data, in line with Evidence-Based Practice (EBP) standards.

Five robust scientific databases were utilized: PubMed, Web of Science, Google Scholar, Lillocat, and ScienceDirect. The screening process resulted in the inclusion of 42 scientific articles. These articles underwent rigorous analysis to extract data regarding oral language assessment and its psychometric properties.

The study succeeded in identifying assessment tools covering all domains of oral language (at both comprehension and expression levels), as well as identifying tasks for each linguistic domain that possess acceptable psychometric properties, despite the observation of generally small statistical sample sizes in most of the reviewed studies.

5-3/A Study by Nassima Touhami (2023): The Reality of Speech-Language Pathology (SLP) Care for Oral Language in Allophone Children. This study aims to review the reality of professional practices among Speech-Language Pathologists (SLPs)

when dealing with multilingual children whose mother tongue differs from the dominant language of the country of residence (Allophones). The study seeks to verify whether there are methodological specificities that distinguish this type of intervention compared to the care provided to monolingual French-speaking children.

To achieve this goal, an electronic questionnaire was designed for practicing specialists supervising multilingual children, with 24 specialists participating in the survey. In addition to the questionnaire responses, in-depth qualitative data were gathered through four semi-structured interviews.

The findings provided a clear vision of the reality of clinical practices directed toward multilingual children. They also revealed urgent needs expressed by professionals, including the need for assessment tools more adapted to the patients' native languages and the provision of informational and advisory materials for parents. Furthermore, specialists pointed to a lack of initial university training regarding this specific population, expressing a desire for richer information resources to enable them to adapt their practices and improve the quality of care provided.

5-4/Aurélie Takam Taguemné's Study (2010): "Developing and Standardizing a Tool for Language Assessment in Preschool and Detecting Prerequisites for Basic Education in Cameroon: A Study of Cases of Language Development Delay. This study aimed to design and standardize a scientific tool for assessing linguistic abilities in French-speaking preschool children in Cameroon, given the absence of specialized speech therapy services. To develop the BATEDA battery, the study relied on language acquisition theories and psychometric standards; the battery consisted of 11 tests covering language transmission modes, linguistic components, and verbal memory. Results conducted on a sample of 159 children demonstrated that the tool possessed excellent psychometric properties in terms of reliability, internal consistency, and predictive validity for academic achievement.

The study recommended the necessity of focusing on early screening and involving the surrounding environment, including parents and teachers, to reduce school wastage and improve the quality of educational intervention.

6- Oral Language: Zainab Shuqair indicates that: "Oral language is a means of transmitting a message from the source to the recipient, and this utterance is spoken, perceived by the receiver through the sense of hearing" (Mohamed Al-Nubi, 2011, p. 164). Thus, oral language is a spoken language that embodies an individual's feelings, relying on the use of expressive voice and sound pronunciation to ensure effective communication.

7-Oral Language Skills: Oral language includes the necessary skills for communication; it involves using spoken language to communicate with others (speaking) and understanding the spoken language of others (listening). In other words, oral language comprises two fundamental skills through which an individual's competence in communicating correctly and accurately develops:

A. Listening Skill (Receptive Language): This is the human brain's ability to receive linguistic messages from various sensory channels, then analyse, understand, and comprehend them. The brain relies on a vast store in memory of linguistic symbols and what they represent in terms of objects and concepts, subsequently linking heard words to the things, actions, and experiences they express.

B. Production Skill (Expressive Language): This is the human brain's ability to produce appropriate linguistic messages to complete the communication process. This is done by identifying the appropriate messages and then sending them to the responsible muscles to finally appear in the form of words or otherwise. In short, it represents the individual's ability to express what they want using speech (Said Kamal Al-Ghazali, 2011, p. 266).

Thus, we conclude that oral language includes both expressive oral language skills and receptive oral language skills, as linguistic reception is essential for the development of linguistic expression.

8- Importance of Oral Language: Oral language occupies a central position in contemporary communication and serves as the primary means of language instruction, as hearing and speech are utilized more extensively than reading and writing. It encompasses two main skills: listening, which is associated with receiving information, and speaking, which is associated with conveying it during interaction. Together, these two skills form the essence of daily linguistic interaction.

9- Levels of Oral Language:

9-1 Phonological Level (Sound Level): The phonological level represents one of the fundamental levels of linguistic analysis, as it deals with the sound system of a language in terms of sound organization and their functions in word construction. It investigates how sounds are structured within the linguistic system and their role in distinguishing between different linguistic units, particularly words, by classifying them into distinctive contrastive units. It also focuses on studying the changes that occur in the sounds of a specific language during the process of word formation, and how these sounds interact within the linguistic context (Ben Bouzid, 2022, p. 15).

9-2 Syntactic Level: The syntactic level is concerned with studying sentence structure and the organization of its components according to precise grammatical and morphological rules, which are considered fundamental for achieving linguistic competence. This level addresses the relationships governing the arrangement of linguistic units within a sentence and the method of their construction, whether at the word level or the complex sentence level. Within this framework, Morphology is treated as a field concerned with the internal structure of words and the changes related to singular/plural forms and verb conjugations across different tenses. Meanwhile, Grammar (Syntax) specializes in studying the rules that govern sentence construction, the organization of its elements, and the mechanisms of linking them with other sentences within the linguistic context (Al-Zuraikat, 2005, p. 112).

9-3 Semantic Level: This level is concerned with understanding and comprehending the meanings of words and vocabulary, whether in the context of reception and reading

or in speaking and writing. This level includes the ability to classify concepts, define them accurately, and distinguish between synonyms and antonyms, in addition to detecting semantic ambiguity and determining the appropriate meaning based on context (Ben Arabia et al., 2016, p. 25).

10-4 Pragmatic Level: The pragmatic level represents the applied dimension of language, focusing on how it is used in various communicative situations while considering the context, the nature of the listener, and the situation in which the language is employed. This level is interested in language functions and their meanings in actual use, as these functions change according to different communicative situations and contexts. The pragmatic level includes several functions, most notably: the performative, regulatory, interactive, personal, representational, and imaginative functions, among others that contribute to achieving effective communication between individuals (Al-Farmaoui, 2011, p. 16).

11-Characteristics of Persons with Intellectual Disabilities:

11-1/Linguistic Characteristics: Persons with intellectual disabilities suffer from a general slowness in linguistic development, which can be observed in early childhood stages. A child with an intellectual disability is delayed in speech and language acquisition, and the difficulties they face can appear across all levels of language: articulation, utterance, sentence construction, grammar, comprehension, and language use. All these communication problems and difficulties may explain some of their disordered behaviours, through which the intellectually disabled individual attempts to communicate with the environment despite the challenges faced in this field. From a measurement perspective, in general, the psychometric profile of persons with intellectual disabilities indicates that they succeed more in non-verbal skills on intelligence tests than in verbal skills (Jean Dumas, 2002, p. 50).

11-2/ Cognitive Characteristics:

*** Attention:** Persons with intellectual disabilities suffer from a weak ability to attend and a high susceptibility to distraction. This explains their lack of perseverance or

continued performance in educational settings if the situation lasts for a duration that is moderate or appropriate for typically developing normal peers. The degree of attention deficit increases as the degree of intellectual disability increases (Salman Sarah, 2014, p. 51).

* **Memory:** Persons with intellectual disabilities face difficulties in memory compared to their typically developing peers, especially Short-Term Memory (remembering events or stimuli the individual was exposed to a short time ago). It can be said that attention is a necessary process for memory; therefore, weak attention results in weak memory.

* **Distinction:** The processes of attention and memory suffer from a noticeable deficiency in those with intellectual disabilities, which reflects negatively on their ability to distinguish compared to their typically developing peers. The degree of difficulty in performing discrimination tasks varies according to the severity of the intellectual disability, in addition to the influence of various other factors. These difficulties appear clearly in distinguishing between shapes, colours, sizes, and weights, as well as between different smells and tastes (Mustafa Nour Al-Qamash & Khalil Al-Maayta, 2009).

* **Generalization:** "Among the difficulties faced by individuals with intellectual disabilities is the failure to generalize and transfer the impact of learning from the classroom to the natural environment. This includes the inability to utilize previously acquired information and skills in situations that are either different from or similar to those in which they were trained. This may be attributed to a reliance on concrete concepts rather than abstract ones when interacting with objects, as well as a limited perception of the relationships between these concepts, which in turn hinders the application of what has been learned." (Khawla Ahmed Yahya and Majda Al-Sayed Obeid, 2005, p. 142).

12- Pilot Study: The pilot study is considered the first step for any scientific research in its field dimension because it encompasses various aspects of the proposed problem. Additionally, it provides an initial perspective on the study variables and enables the

reformulating or adjusting of hypotheses based on primary data. The objectives of the pilot study in the current research are represented in the following points:

- Becoming familiar with the field of study.
- Defining the study sample and the possibility of accessing it.
- Identifying the size of the study population to determine the type, selection method, and size of the sample.
- Understanding the various conditions under which the study will be conducted and the potential difficulties that may hinder its progress.
- Selecting tools that align with the study's objective and verifying their suitability for the target sample. This was completed after reviewing a set of tools designed to measure the phonological and functional performance variables of oral language in educable children with intellectual disabilities.

This field study was conducted at the Psychopedagogical centre for Mentally Handicapped Children No. 01. During this phase, the "Chevrie-Muller" test was reviewed and selected for this study to detect the phonological and functional disorders suffered by children with intellectual disabilities.

13-Study Methodology: Given the nature of the topic and its research objectives, the Descriptive Method using a Case Study approach was adopted. This is considered one of the most suitable methodologies for conducting an in-depth and comprehensive study of individual cases, as it allows for the collection of detailed data regarding the psychological and linguistic characteristics of the case under study, followed by a precise analysis interpreted in light of the approved theoretical framework. This methodology serves as an effective scientific tool for diagnosing performance levels and identifying strengths and weaknesses among individuals with special needs (Fikri Latif Metouali & Khaled Ghazi Al-Dalbehi, 2017).

Accordingly, the current study sought to identify the level of phonological and functional oral language performance in educable children with intellectual disabilities attending the Psychopedagogical Centre No. 01 in the province of M'sila.

This was achieved by diagnosing the nature of the linguistic difficulties they suffer from and uncovering the strengths and weaknesses in their linguistic performance.

14-Study Limits:

14-1/Temporal Limits: The field study was conducted in May 2025.

14-2/Spatial Limits: The field study for the topic "The Level of Phonological and Functional Oral Language Performance Among Educable Children with Intellectual Disabilities" was carried out at the Psychopedagogical Centre for Mentally Handicapped Children No. 01, "Chahid Mokrane Ali" in the province of M'sila. This institution is specialized in the care and rehabilitation of children with intellectual disabilities and includes various classrooms and facilities dedicated to different age groups and disability levels.

15. Study Sample: The study sample consisted of three cases of children with intellectual disabilities, selected through a purposive sampling method from the Psychopedagogical Centre for Mentally Handicapped Children No. 01 in the province of M'sila. In selecting the sample, the following criteria were taken into account:

- The absence of severe sensory or motor impairments that might hinder interaction.
- The stability of the child's general health condition.
- Obtaining parental consent for participation in the research
- The child's ability to interact with the Speech-Language Pathologist (SLP).

Table No 01: Some characteristics of the study sample (Produced by the authors, 2025)

Case No	Case	Age	Gender	Type of disability	Degree of disability
01	Ch. R	13	Feminine	Intellectual disability	Mild degree
02	D. S	13	Masculine	Intellectual disability	
03	B. Z	11	Feminine	Intellectual disability	

From the table above, it can be observed that the study sample consists of three (03) children with intellectual disabilities. Two of the cases are approximately 13 years old, while the third case is 11 years old. Regarding gender, the sample includes two females and one male. As for the degree of disability, all cases are classified as having mild intellectual disability.

16 .Study Instrument:

Chevrie- Muller Test: The Chevrie-Muller Test is one of the assessment tools specifically designed to detect language disorders in children. It is considered a verbal, performance-based, and linguistic assessment developed by **Chevrie- Muller A.M., Simon P., and Decant (1981)** and later published by the Centre for Applied Psychology in Paris.

1. Articulation: The articulation subtest measures the motor execution of primary speech gestures corresponding to phonetic models. It was selected to assess the mechanisms of speech production in children in order to determine the consistency and variation of sounds and syllables, according to an organized framework. The task involves selecting the correct syllable by placing an appropriate form within a given verbal context.

2. Phonology:

- **Picture Naming Item:** The identification of pictures or objects allows for the elicitation of spontaneous verbal expression, which is then compared through repetition. It appears that the standardization of lexical items within the child's linguistic context develops from the traces left by articulation during communicative practice and is reinforced through long-term memory consolidation. Images of objects can be observed as distinct representations in the child's memory. The child expresses these representations using the vocabulary he or she has acquired, which may not necessarily form complete sentences according to syntactic rules; however, an adult can recognize the symbols that refer to the image of the object the child intends to describe.

- **Easy Word Repetition Item:** The easy word repetition test includes items drawn from the child's familiar environment and suited to his or her linguistic abilities. Through repetition prompted by the examiner, the child's handling of simple language at the phonetic level and the standardization of language through auditory processing can be observed. During the administration of the test, the examiner must ensure the following:

- The child should not pause while speaking.

- The child should not repeat the same word twice.
- The child should be encouraged to speak.

- Difficult Word Repetition:

The difficult word repetition test differs from the previous one in that it includes words that are outside the child's familiar environment in terms of length and structural complexity. It also incorporates words that may be phonologically similar but semantically different, with the aim of assessing the child's ability to encode, regulate, and retain linguistic forms.

3. Linguistics:

Expression:

Vocabulary Naming: In this item, the examiner asks the child to provide the name of an object shown in a picture, in order to assess the extent of the child's lexical repertoire.

Short Story Construction from Pictures

In this item, the examiner presents the child with a series of pictures representing the events of a particular story and asks the child to narrate the story based on what he or she observes. The storytelling test aims to assess two important aspects of the child's linguistic performance: the ability to store ideas and lexical items, in terms of both their quantity and their organization.

Comprehension:

- **Duck Comprehension item:** The Duck Test does not require verbal responses. It assesses the child's comprehension abilities through the instructions provided by the examiner. The test includes a set of questions such as a directive:

"Take the two ducks that are swimming and put them in one pond."

The child is expected to execute the instruction through specific motor and manual responses.

- **Tokens:** The Token Test does not require verbal responses, similar to the previous tests, as it assesses comprehension abilities at the level of both simple and complex sentences. The test uses a variety of tokens.

- **Symmetry / Sameness:** This test includes a set of pictures representing objects that are either similar or different. The examiner provides the instruction (e.g., asking whether the items are identical) and requests the child's response.

Verbal Comprehension: Through a combined test of comprehension and expression, the examiner asks questions related to the content of the pictures and scenes presented. It is observed that the child responds more easily to direct questions and generally understands the meaning of interrogative words used in the questions, such as what, with, who, etc.

However, he confuses the use of certain terms for denotation, or errs in estimating dimensions.

Picture Identification: This test assesses the level of linguistic comprehension in particular; it is sufficient for the child to hear the word to point with their finger to the corresponding image. The test reveals the child's repertoire of 'unused' words- those understood without verbal expression, but through pointing. From this, it is inferred that the child's receptive vocabulary (words understood) is more extensive than their expressive vocabulary (words spoken)."

4. Retention:

- **Digit repetition:** The digit repetition test measures the child's recall ability. It consists of a sequence of numbers, each pronounced separately by the examiner, and the child is asked to repeat them.

- **Sentence Repetition:**

Table No. (2): Distribution of Cases by Gender, Age, and IQ Score, produced by the authors,

2025

Cases data	Case 01	Case 02	Case 03
Name	Ch.R	D.S	B. Z
Gender	Feminine	Masculine	Feminine
Age	13 (08/03/2012)	13 (23/08/2011)	11 (03/02/2014)
Intelligence quotient	80	60	60

Type of Disability		Mild intellectual disability	Mild intellectual disability	Mild intellectual disability
Prenatal and Perinatal Information:	Pregnancy	Wanted	Wanted	Wanted
	Taking medicines during pregnancy	No	No	No
	Type of delivery	Natural	Natural	Natural
	Feeding	Natural	Natural	Natural
Growth and development	Psycho-motor development	Delayed	Delayed	Delayed
	Language development	Observed delay in first words	Observed delay	Observed delay
	Social interaction	Normal	Normal	Normal

This test consists of a set of coherent and relatively long sentences. The examiner pronounces each sentence individually and asks the child to repeat it accurately. The sentences revolve around a clown character, and the examiner narrates the story in an engaging manner, describing the clown's adventures in order to attract and maintain the child's attention.

17- Presentation of the Results:

A. Presentation of the Results of the Chevrie-Muller Test for the Assessment of Oral Language – Case 1:

1. Phonological Test – Assessment of Speech Production

1.1 Naming Phonology (Picture Naming Item) Dex: 69/100

1.2 Repetition Phonology:

- Repetition of Easy Words: Rep: 71/100

- Repetition of Difficult Words:

Table No 03: Repetition of difficult words, Case 01 (Produced by the authors, 2025)

Words	Recording	Type of Disorder
استئصال (Isti'essal)	اتصال Itissal	Omission
مستشفى (Mostachfa)	متشفى Motachfa	Omission
مؤتمر (Mo'etamar)	موتمر Motamer	Omission
ابراكسيا (Apraxia)	00	00
بيروقراطية (Birocratia)	بيروطاطية Birottattia	Substitution
ارطفونيا (Orttophonia)	ارطفونيا Ortophonia	01
Total of correct words: 1/6		

2. Articulation Test:

Table No. 04: Articulation Test: Assessment of the child's ability to reproduce phonemes, Case 01. (Produced by the authors, 2025)

Item	Attempt 01	Attempt 02	Item	Attempt 01	Attempt 02
S	1	1	F	1	1
Ch	0	0	Kh	1	1
J	0	0	Z	1	1
ART: 4/6					

Qualitative Analysis of the Oral Language Assessment for the Chevrie-Muller Test (Case 1).

- The response rate for the Naming Phonology item is estimated at: 69%.
- The response rate for the Repetition of Easy Words Phonology item is estimated at: 71%.
- The response rate for the Repetition of Difficult Words Phonology item is estimated at: 1/6.
- The response rate for the Articulation item is estimated at: 4/6

A. Qualitative Analysis of the Oral Language Assessment – Chevrie-Muller Test

(Case 1): Through the application of the Chevrie-Muller Test on Case (1), the results indicate that the girl was able to name 26 pictures out of 29 in **the Naming Phonology item**. This performance is considered good and indicates that her expressive oral abilities are at an average level. However, some minor difficulties were observed,

particularly regarding the retrieval of certain vocabulary or naming them accurately, which may be attributed to a relatively limited lexical repertoire or slow verbal access to the appropriate word.

As for the **Repetition of Easy Words item**, the child scored 20 out of 28, which reflects the presence of some articulation errors, especially in words that require precise motor coordination of the speech organs, indicating a mild articulation disorder that may be related to weaknesses in phonological skills or in auditory repetition mechanisms.

Regarding the **Repetition of Difficult Words item**, the result was weak, as the child was able to correctly repeat only one word out of six. This highlights the presence of a moderate language disorder, which becomes more pronounced when dealing with long or phonetically complex words. This may reflect a deficit in phonological representation or a limitation in verbal auditory memory.

As for the **Articulation item**, the child scored 4 out of 6, with some errors recorded in the pronunciation of certain sounds. This indicates a mild to moderate articulation disorder that may sometimes affect speech clarity, without significantly impeding overall communicative ability.

In general, the results of Case (01) reveal the presence of articulation and language disorders of varying degrees, which require targeted remedial intervention aimed at enhancing phonological skills, expanding the lexical repertoire, and supporting verbal auditory memory.

B. Presentation of the Results of the Chevrie-Muller Test for the Assessment of Oral Language – Case 2:

1. Phonological Test – Assessment of Speech Production:

1.1 Naming Phonology (Picture Naming item): Dex: 73/100.

1.2 Repetition Phonology:

Repetition of Easy Words: Rep: 82/100

Table No. 05: Repetition of difficult word, Case 02. (Produced by the authors, 2025)

Words	Recording	Type of disorder
استئصال (Isti'essal)	اتصال (Itissal)	Omission
مستشفى (Mostachfa)	مستنفا (Mostanfa)	Omission + substitution
مؤتمر (Mo'etamar)	تمر (Tamar)	Omission
ابراكسيا (Apraxia)	00	00
بيروقراطية (Birocratia)	بيروكراتية (Birokratia)	Substitution + Omission
ارطفونيا (Orttophonia)	الرتوفونيا (Eertophonia)	00
Total of correct words: 1/6		

2. Articulation Test:

Table No. 06: Articulation Test: Assessment of the child's ability to reproduce phonemes Case 02. (Produced by the authors, 2025)

Item	Attempt 01	Attempt 02	Item	Attempt 01	Attempt 02
S	1	1	F	1	1
Ch	1	1	Kh	1	1
J	1	1	Z	1	1
ART: 6/6					

- Qualitative Analysis of the Oral Language Assessment for the Chevrie-Muller Test (Case 2)

- The response rate for the Naming Phonology item is estimated at: 73%
- The response rate for the Repetition of Easy Words Phonology item is estimated at: 82%
- The response rate for the Repetition of Difficult Words Phonology item is estimated at: 1/6.
- The response rate for the Articulation item is estimated at: 6/6.

B. Qualitative Analysis of the Oral Language Assessment (Chevrie-Muller) – Case

2: Through the application of the Chevrie-Muller Test to Case (02), the results indicate that his performance in the Naming Phonology item was good, as he was able to name most of the presented pictures, with some hesitations or minor errors recorded in certain vocabulary words. This indicates that his expressive language skills in this aspect

are acceptable; however, he may experience slight difficulties in word retrieval or in naming less common items.

In the **Repetition of Easy Words** item, the child demonstrated good ability to repeat a large number of words correctly, with only a few limited errors, reflecting good control of articulation when handling familiar everyday vocabulary.

As for the **Repetition of Difficult Words** item, he was unable to correctly repeat any of the presented words, indicating a clear weakness in the phonological representation of complex words. This may be related to difficulties in phonological processing or in verbal auditory memory.

Regarding the **Articulation** item, he showed accurate performance without errors, indicating the integrity of the articulatory apparatus and the ability to produce sounds correctly.

Based on these results, it can be concluded that the child shows signs of a mild language disorder, mainly affecting the processing and retrieval of complex vocabulary, while his articulation abilities remain intact and he responds well to simple linguistic tasks.

C. Presentation of the Results of the Chevrie-Muller Test for the Assessment of Oral Language – Case 3:

1. Phonological Test – Assessment of Speech Production:

1.1 Naming Phonology: Dex: 80/100

1.2 Repetition Phonology:

Repetition of Easy Words: Rep: 89/100

Table No 07: Repetition of Difficult Words, Case 03. (Produced by the authors, 2025)

Words	Recording	Type of Disorder
استئصال (Isti'essal)	استئصال Istissal	Omission
مستشفى (Mostachfa)	مشتشفى Mochtachfa	Omission + substitution
مؤتمر (Mo'etamar)	موتمر Motamer	Omission
ابراكسيا (Apraxia)	أباكسيا Apaxia	Omission
بيروقراطية (Birocratia)	00	00

ارتفونيا (Orttophonia)	ارتفونيا Orttophonia	01
Total of correct words: 1/6		

2. Articulation Test:

Table No 08: Articulation Test: Assessment of the child's ability to reproduce phonemes, Case 03. (Produced by the authors, 2025)

Item	Attempt 01	Attempt 02	Item	Attempt 01	Attempt 02
S	1	1	F	1	1
Ch	1	1	Kh	1	1
J	0	0	Z	1	1
ART: 5/6					

- Qualitative Analysis of the Oral Language Assessment for the Chevrie-Muller Test (Case 3)
- The response rate for the Naming Phonology item is estimated at: 80%
- The response rate for the Repetition of Easy Words Phonology item is estimated at: 89%
- The response rate for the Repetition of Difficult Words Phonology item is estimated at: 1/6
- The response rate for the Articulation item is estimated at: 5/6.

C. Qualitative Analysis of the Chevrie-Muller Oral Language Test – Case 3:

Through the application of the Chevrie-Muller Test to Case (03), the results indicate that the performance in **the Naming Phonology** item was very good, as the child was able to correctly name most of the pictures. This indicates a considerable lexical repertoire and effective word retrieval abilities, with only a few minor errors that do not affect overall comprehension.

In the **Repetition of Easy Words** item, the child demonstrated good control in pronouncing the presented words, successfully repeating the majority of them accurately. This indicates adequate phonological competence and good comprehension of simple vocabulary.

In contrast, the child showed weak performance in the **Repetition of Difficult Words item**, managing to correctly repeat only one word out of the presented set. This

reflects difficulty in processing complex and long words, and may indicate a deficit in verbal auditory memory or in the ability to store and retrieve sounds accurately.

Regarding the **Articulation** item, the child was able to produce most sounds correctly, with only one error recorded. This suggests a mild articulation disorder that does not significantly affect communication quality.

Based on these observations, it can be concluded that the child demonstrates generally good linguistic and articulatory abilities, with some noticeable difficulties in handling complex vocabulary, which calls for targeted therapeutic support focused on improving phonological repetition skills and enhancing phonological processing.

18. General Conclusion:

The analysis of the Chevrie-Muller Test results, measuring both phonological performance (naming and repetition) and functional performance (articulation) in the three cases, showed the following:

It was found that Cases (01) and (02) experience difficulties in naming pictures or repeating complex words, reflecting deficits in phonological processing and verbal auditory memory, which are two essential aspects in the development of oral language in children.

Moreover, the articulation errors recorded, whether through sound substitutions or omissions, confirm the presence of speech disorders that require careful assessment and an individualized therapeutic intervention plan.

Although Case (03) demonstrated good performance on simple tasks, such as repeating easy words or articulating sounds, the overall performance of all cases revealed deficits in higher-level language skills, including complex oral expression and advanced auditory comprehension.

- Conclusion:

Oral language is the primary means by which humans communicate and express their thoughts and emotions. It represents a vital skill for children in general, supporting the development of their social and educational relationships. However, children with

intellectual disabilities face clear difficulties in acquiring this skill, which negatively affects their ability to communicate effectively with their environment.

This study focused on oral language difficulties among children with mild intellectual disabilities who are capable of learning. Through data analysis, we were able to reach important results that clarify the nature of the challenges faced by this group. The study also addressed the proposed hypotheses and contributed to achieving the intended objectives.

At the conclusion of the study, we provided a set of recommendations aimed at improving language rehabilitation programs and raising awareness of the importance of early and specialized intervention to develop verbal communication skills among these children, thereby enhancing their social and educational integration. The most important of these recommendations are:

The necessity of early detection of children with special needs to ensure timely intervention and appropriate support.

Establishing specialized centres for this category in every administrative district to facilitate access, along with providing the necessary speech and language tests for diagnosis and follow-up.

Organizing awareness lectures for parents on how to interact with this category and find appropriate solutions. Intensifying studies and research that highlight the difficulties faced by this group in order to support their integration into society.

Equipping psychological and educational centres with modern educational tools and audiovisual technologies to help develop language skills.

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