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School-Based Speech-Language Pathology for Persons with Special Needs in Algeria: Reality and Prospects

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Abstract:
This paper presents the idea of the school-based speech-language pathologist (SLP) and his role in supporting the education of special needs students in light of the evidence-based international standards applied in this field. Four concepts, which are crucial to the research, take place within such a diagnostic map of this reality: isolated clinical care, the delayed referral system, fragmentation of the march in care, functional under-coordination. The descriptive, analytical, critical, and comparative approach was adopted in the study based on the use of international academic sources such as guidelines of American Speech-Language-Hearing Association (ASHA) and guidelines of the International Classification of Functioning, Disability and Health (ICF-WHO), as well as available Algerian laws and researches. The paper highlights a structural gap between Algerian practice and international standards identified by a lack of integrated institutional structure, poor university training for careers and predominance of the therapeutic model over a preventive and educational approach. It ends with suggestions for reform to move from the passive clinical approach to a complete preventive school health approach.
Keywords: school-based speech-language pathology practice, Algeria, persons with special needs, international standards of scientific practice.

Introduction

Educational health of people with special needs is an educational and a health right enshrined in Article 24 of the United Nations Convention on the Rights of Persons with Disabilities (2006), which obliges member states to make sure that inclusive learning environments are responsive to the needs of all learners, students experiencing communication, language, and speech disorders and students with special needs (United Nations, 2006).

Building on this, the nature of school-based speech-language pathology is that it is a meeting point of health sciences and education sciences. In the school environment, the role of the SLP includes acting as a clinical specialist and an educational practitioner, and also extends to preventive intervention (American Speech-Language-Hearing Association [ASHA], 2010).

As part of the school's support team, the SLP can also help to prevent the development of learning issues and enhance communication between students with the various disorders based on the experiences of many countries that have already introduced the concepts of inclusive education. According to ASHA (2010) and the European Committee of Permanent Liaison of

Speech and Language Therapists/Logopedists (CPLOL, now ESLA) (2016) the role of the SLP in the school involves accompanying three main tasks: early preventative, collaborative education, and specialized therapies.

In contrast, recent Algerian researches report that persistence of SLP in the school scenario is still largely pegged on the isolated detection and follow-up unit coupled with some counseling and coordination efforts without ascending to the level of an integrated inclusive education model as witnessed in most international settings including the Canadian and French cases.

In Algeria, the SLP's role in the school remains unresolved both legislatively and in practice. The gap between international normative standards and actual field reality is considerable, and can be detailed by four fundamental diagnostic concepts: isolated clinical intervention, the delayed referral model, fragmentation of care pathways, and functional deficit.

Based on this discrepancy, between what the international standards (ASHA, ESLA, ICF, RTI) would say regarding the wide, multi-dimensional roles of the SLP in schools, and what the Algerian researches would say based on the reality on the actual practice of speech-language pathology in schools, the research problem can be formulated as follows:

Does the role of the SLP in the Algerian educational system for persons with special needs meet the level of international standards of scientific practice?

Three sub-questions derive from this central problem:

1. What are the international practice standards governing the role of the SLP in the school environment for persons with special needs?
2. What is the nature of the gap between practice in the Algerian reality and practice according to international standards?
3. What recommendations are capable of reducing this gap and developing school-based speech-language pathology practice?

Research Methodology

This study answers these questions through a descriptive, analytical, critical, and comparative methodology, drawing on international and Algerian academic sources (scientific articles), and comparing the presented international standards with the Algerian practice reality.

Study Sections: The study is divided into four axes. The first and second axes cover international standards and the Algerian reality respectively, while the third axis presents critical analysis based on the four concepts (isolated clinical intervention, delayed referral, fragmentation of pathways, functional deficit), and the fourth axis is dedicated to recommendations.

Conceptual Framework

Diagnostic Concepts of Speech-Language Pathology Practice in Algeria

The paper is based on four conceptual diagnostic ideas that define the reality of the school-based speech-language pathology practice in Algeria, then a general definition of school-based speech-language pathology along with international standards is given.

1. Isolated Clinical Intervention (ICI).

This speech-language pathology practice pattern is restricted to delivering services within a closed clinical context- either a specialty center, or a private clinic- out-of-context to the environmental and educational background of the student. In this model, the language disorder

is treated as a mere medical condition that needs individual care, ignoring that language disorder is a social-environmental phenomenon, which must be addressed within its context (World Health Organization [WHO], 2001).

2. Delayed Referral Model (DRM).

This pattern of service is typified by students who need speech-language intervention accessing services after many years of educational and social failure, in the absence of well-structured early intervention schemes. This idea can be compared to the situation in the medical environment, where the manifestation of complications is observed prior to the treatment of the underlying condition (Bouaziz, 2019).

3. Fragmentation of Care Pathways (FCP)

This entails a multiplication of the entities involved in the education and treatment of students with special needs without being networked in an integrated institutional fabric. Such a model introduces a dual fragmentation: horizontal (between specialists at the same level: SLP, psychologist, and teacher) and vertical (between institutions: health, education, and family, Algerian Republic, 2003).

4. Functional Deficit

This model is a paradoxical state where structures are in place but a functional part is missing, that is, where there are apparent institutional and legislative structures in place that appear and seemingly should be adequate but is in fact lacking in a functional component. This can be mainly explained by the fact that the SLP focuses on the medical diagnosis of a student, instead of focusing on functional pedagogical assessment of a student that also benefits both, the teacher and the student, with special needs (Ziyan, 2021).

5. School-Based Speech-Language Pathology

Defined as a specialty that fits at the intersection of health sciences and educational sciences, ASHA describes it as a specialized field that deals with the detection, diagnosis and treatment of communication disorders within the educational community, and with a specific focus on enhancing language, speech, reading, and writing skills in the necessary state that would allow one to achieve academic success (McNeilly and Coleman, 2020).

Literature identifies three patterns of intervention direct intervention (therapy services provided directly to the student), indirect intervention (advice and counsel to teachers and families not in direct contact with the student), and collaborative intervention (active collaboration between SLP and the teacher to design an effective learning environment). The school based SLP practice works by an integrated plan of these three concepts as approved by ASHA indicating that limiting practice to the first pattern alone narrows the speech-language services and limits its preventative efficacy (ASHA, 2001).

6. School-Based SLP: Clinical-Health Framework to Educational-School Framework.

The SLP in the educational organization carries out various functions, not just the "isolated therapeutic work" in itself. ASHA has reinvented the role of the SLP in the school setting, but has designated their role as a core part of the school team, one who helps students meet academic standards, one whose role is to evaluate, diagnose, and treat people with communication disorders and also play the preventative, consultative and coordinative roles within the school team. Specifically, the ASHA stated that it could be connected with a number of roles such as the following ones: to provide direct and indirect interventions, to be involved

in student assessment, collaboration work with teachers, contributing to the creation of inclusive curriculums, and participating in educational decision-making (ASHA, 2010).
This was supported by Ehren et al. (2006) via the Response to Intervention (RTI) multi-tiered model with struggling students, with the role of the school SLP being: extensive screening, in-classroom intervention, sustained monitoring of progress, and intensive intervention where other interventions are ineffective. According to ASHA, Algerian SLP practice relies exclusively on direct intervention, which narrows the range of services and limits their preventive impact, thereby entrenching the isolated clinical intervention model (ASHA, 2001).

1. International Standards for School-Based Speech-Language Pathology Practice

1.1 The International Classification of Functioning as a Comprehensive Framework

A paradigm shift was created by the International Classification of Functioning, Disability and Health (ICF) issued by the WHO in 2001 which replaced the deficit model that focused on impairment with the biopsychosocial model that considers both environmental and individual factors and societal involvement (WHO, 2001).
As a part of this, the work of the SLP extends into more than focusing on clinical disorders to also include: assessing the effects of the disorder on the involvement of the student in their lives and academic progressions, identifying the facilitating or inhibiting environmental factors, and establishing functional therapeutic objectives tied to everyday life and academic career. This framework was officially adopted by ASHA in 2004 (ASHA, 2004).

a. Response to Intervention (RTI)

This model developed in the USA and Canada is regarded as being the gold standard of school-based SLP and is based on three tiers of support: universal prevention, targeted group intervention, and intensive individual intervention.

Tier 1 (Universal Intervention): Preventive programs with all students in the classroom, with SLP actively involved in designing oral language programs.

Tier 2 (Targeted Intervention): small groups of school-going children that have been screened appropriately at an earlier stage and who show signs of difficulties.

Tier 3 (Intensive Intervention): Focused on those cases that are formally diagnosed with complex disorders, where they receive intensive services on a one-on-one basis.

What sets this model apart is that continuous collaboration occurs not only within the therapy room but also in the classroom and even beyond, to other educational projects (Ehren et al., 2006).

b. Multidisciplinary Team Models

According to the scientific literature, there exist three team models in schools, which are categorized based on the degree of integration: multidisciplinary teams (each specialist works independently, reports are drawn up later); interdisciplinary teams (separate assessments with report compilation afterwards and joint planning); and transdisciplinary teams (role sharing and exchange and maintaining the original specialty- the most appropriate model one with the available literature; Snell & Janney, 2005).
The CPLOL European model has made it clear that the school SLP is expected to be an active participant of the transdisciplinary team and be able to communicate on an interpersonal level and mentor using his leadership skills (CPLOL, 2019).

c. Universal Design for Learning (UDL) and Speech-Language Pathology

Inclusive education was declared in 1994 by the Salamanca Statement that stated that inclusive education goes beyond physical integration to ensure full participation and moving of the learning environment to the needs of all learners (UNESCO, 1994). Here, the SLP performs a central part using the principles of UDL, which design flexible learning environments and allow all learners to gain access to educational materials, including learners with communication disorders (CAST, 2018).

2. Speech-Language Pathology Practice in Algeria

Before assessing the reality of speech-language practice in Algeria, it is necessary to have a prior knowledge of the training background and the institution and law context in which it is used. These dimensions are discussed individually in the next few subsections.

2.1 Legislative Framework

The development of legislation in the field of the protection and education of the disabled has occurred in Algeria. The basic legal instrument which guarantees the right to education or health of these members is Law No. 02-09 on Protection and Promotion of Persons with Disabilities (Algerian Republic, 2002).

Nevertheless, a critical inference of this law shows the main weaknesses: Article 17 on medical and paramedical care is non-explicit in defining the role of the SLP within the educational facility as it is vague when it comes to the distribution of competences between Ministries of Health and National Education. This vagueness results in an institutional gap and the inability of field-level coordination (Bouaziz 2019).

An Executive Decree N°03-461 on conditions relating to care of persons with special needs does not define the role of the SLP in the multidisciplinary educational team as compared to the French Law 2005-102, which stipulates that every school must develop an individual integration project (PPS) associated with each student with a disability, including speech-language therapy sessions (Algerian Republic, 2003).

2.2 Care Structures

In Algeria, the aim is to offer person with special needs care by various institutions such as:

- Specialized Education and Vocational Training Centers (CESP): The centers provide specialized education with a relative amount of rehabilitation services, under the Ministry of Social Solidarity.
- Centers of Disabled Children (CAAT): Geared towards children younger than school-age.
- Specialized Pedagogical Institutions (IMP): The ones designed to meet moderate and severe intellectual disability learners.
- Inclusive Education Classes are a relatively new trend, in which students have special educational needs who will be integrated into regular schools with special support, issued by the Ministry of Education (Algerian Ministry of National Education, 2021).

The root issue is that these structures work based on institutional disconnection as opposed to communication and integration. CESP centres are part of Ministry delegated for Family and Women's Affairs, inclusive education classes are in the Ministry of Education and public and

private SLP clinics are in the health sector. The dispersion of administration does not make it possible to guarantee coordinated and effective referrals (Ayyash, 2020).

2.3 University Training

The specialty of speech-language pathology was first in the 1980s to be introduced to Algerian universities, initially at the University of Algiers 2 (Bouzareah) and later expanding to include several universities, with a training duration of five years under the LMD system, which is comparable to four or five years of European training frameworks (Algerian Ministry of Higher Education and Scientific Research, 2018).

Nonetheless, when compared to one another concerning content, one will notice there are major loopholes. Traditional Algerian programs tend to emphasize clinical aspects of therapeutic practices (diagnosis and individual-based treatment) at the expense of programs related to school-based SLP, interdisciplinary work, and proactive interventions methods. According to field reports of students, internships in education institutions are fewer as compared to clinical internships (Ziyan, 2021). In a survey study conducted by Reyhani and Belkhir (2022) 68% of Algerian SLP graduates think that their training has not enabled them to work in schools.

2.4 Early Detection and Diagnosis

The care of the detection of communication disorders is one of the most remarkable fields showing this difference between the international standard and the reality in Algeria. In the USA, Canada and France, universal screenings are regular and are carried out at the start of each educational level using standardized reliable instruments that have been validated on local populations (Justice & Redle, 2014).

Lack of such tools in Algeria has three consequences: delayed intervention, students do not see an SLP until years after they have struggled and often develop or exacerbate stuttering and dyslexic symptoms between the ages of seven and nine; misdiagnosis, when students who have a language problem are diagnosed as having an intellectual disability or behavior problem; and missed intervention window, when the difficulties experienced by students grow and reinforce academic failure.

Belmakdem et al. (2018) showed that this delay in patient referral in Algeria from first onset of symptoms is >2 years, affecting 73% of the patients and, before the specialist, 41% of such cases were misdiagnosed, as intellectual disability or behavioral disorder.

2.5 Geographic Distribution and Educational Equity.

There is an acute imbalance in the overall geographic distribution of SLPs in Algeria, with majority of the concentration in major provinces (Algiers, Oran, Constantine, Annaba), and interior/southern provincial severely short specialist problems. In most of the interior provinces, some unofficial statistics estimate the distribution ratio to one SLP per 100,000 inhabitants, compared to more than ten in major provinces--quite unlike the WHO recommendation of five SLPs per 10,000 inhabitants (WHO, 2015).

3. International Standards and Algerian Reality: Critical Comparative Analysis

The actual point of the critical analysis is not just to record gaps; it's also to analyse the causes which can create and sustain gaps. According to the current study based on the information collected, it has been found that there are four patterns of structures that create a synergy

between them, thereby forming a network of obstacles to school-based implementation in the Algerian context.

3.1 Isolated Clinical Intervention

The origins of this pattern in Algeria trace back to the structure of the discipline itself. In Algeria, the training of speech-language pathologists (SLPs), as a specialty, existed outside of the educational system but within the health system, and was offered in the faculties of medical sciences and psychology. This trajectory defined the conception of SLP practice as therapy and not education, which was a conception that is crystallized in Law 02-09 and which declassifies SLPs among health care professions (Algerian Republic, 2002).

Hamza (2020) added that SLPs working in private clinical services and specialized care centers represents more than 80% of total competencies and that SLPs who are actually attached to educational institutions do not exceed 12% of total competencies. This runs counter to the ICF framework, which shifts focus from the disorder itself to its functional impact on the student's participation in daily and academic life (Casemore & Freshwater, 2007).

The field consequences of this isolated model are: discontinuity of therapeutic gains, where the student is unable to transfer the skills acquired in the clinic into functional competence in the classroom, due to therapist not utilizing pedagogical tools to understand the difficulties and to design appropriate classroom interventions for the student reducing their impact; generalization difficulty, the student has been documented as not being able to transfer acquired skills from isolated therapeutic setting to natural environments, due to the lack of coordination by the therapist; family exclusion, where the therapist is unable to involve the family in the process of acquisition, which reduces the overall impact and deprives the student of home reinforcement; and teacher marginalization, the teacher is unable to acquire certain tools to understand the student's difficulties, which prevents the teacher from adapting to their needs pedagogically or from designing appropriate classroom interventions.

This approach is referred to as "isolated treatment islands" by Ayyash (2020) and refers to the provision of multiple services without a tie that ties them to a student's educational context.

3.2 International Normative Alternative: Integrated Intervention Model

In contrast to the isolated clinical model, the RTI framework positions the SLP as a proactive partner within the classroom rather than a reactive service provider outside it. Applied at all three tiers, this model ensures that the majority of students receive preventive support before difficulties escalate to the level requiring intensive individual intervention. Fuchs and Fuchs (2006) demonstrated that early application of this model reduces the need for specialized intervention by up to 70%. Similarly, the transdisciplinary team model advocated by ASHA (2010) and CPLOL (2019) embeds the SLP within a coordinated school team, enabling shared decision-making and coherent support plans that extend therapeutic gains into the student’s daily academic environment.

3.3 The Delayed Referral Model in the Algerian Reality

In Algeria, Bouaziz (2019) found no unifying national procedure at school entry for SLP screening and that most often the referral process for an SLP is teacher or familial complaints and not systematic screening which is referred to as the "wait to fail" approach in the anglophone literature.

The optimal intervention window for language delay, stuttering, and dyslexia falls between ages two and six; beyond this window, intervention costs rise while outcomes decline (Fuchs & Fuchs, 2006). Furthermore, Justice and Redle (2014) discovered that there was a cumulative cost of delayed early SLP intervention, and that the cost of each additional three years of intensive intervention was adverse past the first year of delay.

Data analysis revealed three dimensions regarding the presence of this type in Algerian reality: the institutional dimension (the absence of any well- organised collective screening policies at the school's entrance makes the early detection of disorder a random act and depends on the teacher's awareness and the degree of severity); the cultural dimension (social and cultural representations of language disorders, as referred by Larabi (2021), where the delay in realizing a problem exists in a family, especially for children with language delay disorders, is perceived as transient or culturally and religiously associated with factors other than functional language disorders); and the training dimension (Insufficient teacher training on how to detect the indicators of language disorders and appropriate referral, as shown by CPLOL (2019) data, which indicates that the effectiveness of any early referral system depends on the teacher's training in identifying indicators of language disorders and referral rules).

3.4 International Normative Alternative: Proactive Referral Model

The RTI model offers a systematic alternative based on the principle of "screen first, intervene immediately." The Algerian Ministry of National Education (2021) recommended the development of early detection mechanisms in a report, but did not propose an implementable plan with specified resources and clear timelines.

3.5 Fragmentation of Care Pathways and the Institutional Coordination Crisis

Algerian SLP practice embodies this fragmentation in its most acute form: the SLP administratively belongs to the Ministry of Health, the student studies in an institution belonging to the Ministry of Education, while the Ministry of Social Solidarity oversees specialized care centers. The SLP thus finds themselves at a crossroads of three ministries and three pathways with no effective institutional coordination—the common factor being the student who suffers from a disorder (Algerian Republic, 2003).

This fragmentation can be represented as three adjacent circles with no intersection: the health pathway (psychologist, physicians of various specialties, SLP); the educational pathway (classroom teacher, support teacher, educational counselor); and the family pathway (the family finding itself navigating between the first two without clear guidance or a unified coordinator). This parallelism leads to what systems theory terms "institutional silos," where information and interventions accumulate within each pathway without exchange between them.

This reality contradicts Bronfenbrenner's (1979) ecological systems theory, which holds that child development depends not on individual characteristics alone but on the continuous interaction among multiple pathways including family, school, community, and public policies. Effective intervention must weave connections among these pathways collectively rather than working with each in isolation.

3.6 International Normative Alternative: Coordinated Pathway Models

Advanced international systems present two primary models for overcoming the negative consequences of pathway fragmentation: the French "Projet Personnalisé de Scolarisation" (PPS) model, which is a legal document specifically directed at children with disabilities or

special needs that unifies the decisions of all relevant specialists and defines each party's responsibility (French Ministry of National Education, 2005); and the American and Canadian "Individualized Education Plan" (IEP), a formal participatory document prepared collaboratively by the school, family, and specialists (teachers, SLPs, psychologists, and physicians) that includes SLP intervention goals within a unified educational context (ASHA, 2010).

Reyhani and Belkhir (2022) attributed the deficiency in SLP care for students within educational institutions to the absence of such models and tools in the Algerian reality.

3.7 Functional Deficit

Manifestations of this deficit in Algerian reality include: the existence of inclusive classes without accompanying SLP intervention protocols; positions without clear job descriptions; and SLP graduates without institutional guidance toward the school environment (Ziyan, 2021).

Academic studies have identified several factors underlying functional deficit patterns in Algerian reality:

Training factor: Reyhani and Belkhir's (2022) survey revealed that 68% of Algerian SLP graduates find their university training insufficiently prepares them for school-based work, attributed to weak educational SLP units in Algerian university curricula and the absence of systematic field internships in inclusive institutions. By contrast, the University of Montreal in Canada provides an alternative where school-based SLP covers one-third of training content.

Bilingualism factor: The Algerian linguistic environment constitutes a multilingual composition of formal Arabic, colloquial Arabic, Amazigh, and French, in which multilingualism acts as an additional variable amplifying the functional deficit's effect. Kohnert (2013) affirmed that an SLP working in a multilingual environment like Algeria needs specialized training to differentiate between natural linguistic variation and genuine language disorder—training that is nearly absent in Algerian university programs. Morsly (2016) further noted that applying monolingual assessment tools to multilingual learners produces inflated diagnoses with error rates reaching 30%, meaning that tool deficiency produces diagnostic deficiency and consequently intervention deficiency.

Geographic distribution factor: The geographic concentration of SLPs in major provinces reflects a functional deficit in the distribution and employment system, leaving interior and southern provinces nearly deprived of these services—contradicting WHO recommendations requiring five SLPs per 10,000 inhabitants (WHO, 2015).

3.8 International Normative Alternative

A set of internationally applied models and practical pathways addresses the negative consequences of functional deficit in Algerian reality:

1. Deploying itinerant SLPs at the educational directorate level—a model applied in several Canadian provinces for serving remote areas.
2. Including mandatory "school-based SLP" units in university training curricula with a minimum of 60 hours, along with mandatory field internships in inclusive institutions.
3. Establishing a national research laboratory for developing standardized SLP assessment tools on the Algerian population that account for linguistic and cultural diversity (Ben Sheikh, 2022).

4. Adopting "telepractice" SLP in remote and underserved areas, based on ASHA (2021) guidelines confirming comparable outcomes to direct intervention for many disorders.
5. Launching parent-mediated intervention programs, demonstrated by Cochrane Review (Patterson et al., 2018) to double the effect of SLP intervention.

Meryah (2022) noted the necessity of employing SLPs in schools according to teacher declarations for diagnosing and treating reading and writing difficulties, given the incapacity teachers face in dealing with students with learning difficulties. Laour (2021) similarly found that the Algerian regulatory framework assigns the SLP broad roles similar to international standards, but their positioning within the health sector more than the education sector negatively affects the nature of their relationship with the school environment.

Discussion

1. International Practice Standards Governing the School SLP's Role

Algerian studies, including Hamza (2020), Laour (2021), Meryah and Meryah (2022), and Reyhani and Belkhir (2022), reveal that the SLP's presence in school health remains more tied to detection and follow-up units, and that their role tends toward the individual therapeutic model (isolated clinical intervention) with weak systematic coordination with the school (pathway fragmentation), and a clear absence of structural frameworks (functional deficit) allowing them to play preventive (delayed referral) and expanded educational roles. All these factors render the SLP's role nearly absent or limited in the domain of school health for persons with special needs.

2. Nature of the Gap Between Algerian Practice and International Standards

Normative comparison is a strategic necessity for revealing points of dysfunction in Algerian reality, which local and international studies show remains captive to outdated approaches surpassed by leading international models (ASHA, RTI, ICF) in the field of speech-language pathology:

- SLP intervention in Algerian school environments remains separated from those environments, conducted within medical units; whereas according to international models it is fully or partially integrated.
- The team composition in Algerian reality is "technical-administrative," whereas according to international models it operates within a "pedagogical-health" multidisciplinary team.
- Detection timing in Algerian reality occurs at school entry or after failure is recorded; whereas international models practice proactive detection before schooling begins.
- Disability classification follows binary medical diagnosis (healthy/disabled), whereas international models adopt functional classification based on participation and activity.

3. Recommendations for Reducing the Gap and Developing School-Based SLP Practice in Algeria

The recommendations that follow address the structural gaps identified in the preceding sections, organized around three pillars.

First: Legislative and Structural Pillar

- Issuing joint ministerial decrees integrating the SLP within the permanent pedagogical staff of educational institutions.

- Establishing a structural framework for detection and follow-up units supported by a unified data system to provide "educational-health support cells" administratively and functionally integrated within primary schools.
- Adopting the ICF as the sole standard for data collection and case classification in educational institutions.
- Establishing a unified national protocol for SLP screening at primary school entry to dismantle the "delayed referral model" at its roots.
- Mandating the establishment of inclusive classes in schools that supervise the preparation of a personalized integration project (PPS) for students with special needs to overcome the "pathway fragmentation model."

Second: Human Resources, Materials, and Training

- Creating a specialized "School-Based SLP Master's" program with mandatory training units of no less than 60 hours in school-based SLP, and mandatory field internships in inclusive schools of no less than six weeks, in cooperation between Algerian universities and the Ministries of Education and Health.
- Allocating permanent financial positions for SLPs in rural schools and remote areas to ensure educational equity.
- Employing technical means and media to provide remote SLP services (telepractice) following ASHA guidelines emphasizing video intervention inclusion given its positive outcomes, with the aim of reducing the geographic gap and expanding coverage in remote areas.
- Establishing specialized national and local research laboratories in SLP linguistic assessment and diagnosis to develop standardized test batteries accounting for Algerian linguistic and cultural diversity, thereby limiting false diagnoses.

Third: Sectoral and Community Coordination

- Activating the unified "Open EMIS" system to immediately link data from the Ministries of Health and National Education.
- Engaging families through parent-mediated intervention programs, representing a fundamental shift from the isolated clinical model to the multi-party partnership model advocated by international standards.

Conclusion

From this recent analysis it can be concluded:

First: lack of a clear legislative framework and institutional vision consistent with Algerian standards in educational institutions vis-à-vis international standards in the role of the SLP. That results in a series of services of variable quality, located in one place, and largely influenced by interventions of the individual.

Second: The delayed referral model ensues from negligence, not because it is the actual model, but because of the absence of regular early detecting systems and a lack of evidence based systems for referral; This means that a additional one year spent without regular early system means the referral process is going to be delayed by three years.

Third: the lack of connectivity between institutions is a structure-related issue, and not an issue of whether each individual specialist is competent.

Fourth: "Functional deficit," a situation where structures exist (positions or units are open) but capacity doesn't (to act), is especially dangerous because it's exactly when it looks like such structures are in place! It is not enough to have it on the formal agenda to overcome it, it takes real institutional performance.

Algerian reality and international standards remain confused, even on the level of circumstances, yet to overcome this, effort has to be made at various levels:

Fifth: The specific Algerian linguistic situation (dialectal variety and variation of the phonological system) creates a qualitative challenge which can be successfully overcome by creating locally standardized tools of assessment rather than carrying out the measurement with imported tools the adaptation of which is not always successful leading to making diagnoses that will not reflect the true nature of the measured behavior.

Sixth: Transformative capacities are present in the Algerian reality, with its academic qualifications; its vast network of universities and colleges, the development of a digital infrastructure and experience in foreign and regional contexts, which are brought into play.

Based on the above an "answer" to the central problem of study is set in relative terms: Training systems are not entirely absent from school-based SLP practice in Algeria; SLP reform intentions are there as well; but an underpinning change is required: a shift from a reactive and peripheral to a preventive and central model. Inclusive equitable education for persons with special needs in Algeria is to be ensured through situating the SLP at the heart of the educational system.

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