



Original article

## Speech therapy care for learners with dyslexia and dysgraphia

La atención logopédica a los educandos con dislexia y disgrafia

Atendimiento fonoaudiológico a alumnos con dislexia e disgrafia

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### ABSTRACT

Speech therapy care for students with dyslexia and dysgraphia is the result of the essential relationships that are established in the model of care for communication and language disorders in the Cuban nation. The latest studies on "dyslexia" and "dysgraphia" emphasize the need to deepen scientific research; as it has not

been concealed, on an international as well as a national scale, that its attention constitutes a complex and controversial content for the scientific sciences that study it. That is why characterizing speech therapy care for students with dyslexia and dysgraphia, in the province of Pinar del Río, represented the objective of the article in terms of results; research that was formulated with a descriptive character, mediated by the application of methods of the theoretical and empirical level, whose methodological implementation confirmed the need to deepen networking for the management of the multidisciplinary approach, in the learning category as part of the categorical system and in the representation of a didactic-methodological component for care; all of which was founded as genuine, in the direction of speech therapy care for students.

**Keywords:** speech therapy; dyslexia; dysgraphia.

### RESUMEN

La atención logopédica a los educandos con dislexia y disgrafia constituye el resultado de las relaciones esenciales que se establecen en el modelo de atención a los trastornos de la comunicación y del lenguaje en la nación cubana. Los últimos estudios sobre "dislexia" y "disgrafia" acentúan en la necesidad de profundizar en la investigación científica; pues no se ha encubierto, tanto a escala internacional como nacional, que su atención constituye un contenido complejo y controvertido para las ciencias científicas que lo estudian. Es por ello, que analizar la atención logopédica para los educandos con dislexia y disgrafia, en la provincia de Pinar del Río, representó en términos de resultado el objetivo del artículo; investigación que se formuló con un carácter descriptivo, mediada por la aplicación de métodos del nivel teórico y empírico, cuyos resultados confirmaron la necesidad de continuar profundizado en el trabajo en red para la gestión del enfoque multidisciplinario e interdisciplinario, en la categoría aprendizaje como parte del sistema categorial y en la representación de un

componente didáctico-metodológico para la atención; todo lo cual se reconoce en la investigación, como novedoso, para la dirección de la atención logopédica a tales educandos..

**Palabras clave:** atención logopédica; dislexia; disgrafía.

### RESUMO

O atendimento fonoaudiológico aos alunos com dislexia e disgrafia é resultado das relações essenciais estabelecidas no modelo de atenção aos distúrbios de comunicação e linguagem da nação cubana. Os estudos mais recentes sobre "dislexia" e "disgrafia" enfatizam a necessidade de aprofundar a investigação científica; pois não se escondeu, tanto à escala internacional como nacional, que a sua atenção constitui um conteúdo complexo e controverso para as ciências científicas que a estudam. Por isso, analisar o atendimento fonoaudiológico aos alunos com dislexia e disgrafia, na província de Pinar del Río, representou o objetivo do artigo em termos de resultados; pesquisa que foi formulada de natureza descritiva, mediada pela aplicação de métodos de nível teórico e empírico, cujos resultados confirmaram a necessidade de continuar aprofundando o trabalho em rede para a gestão da abordagem multidisciplinar e interdisciplinar, na categoria aprendizagem como parte da categoria sistema e na representação de um componente didático-metodológico para o cuidado; tudo isso reconhecido na pesquisa, como inédito, para o direcionamento do atendimento fonoaudiológico a esses estudantes.

**Palavras-chave:** atendimento fonoaudiológico; dislexia; disgrafia.

## INTRODUCTION

The scientific-technological advances generated today place education professionals in a transformative position in response to the system of influences with which care models are conceived for students, who, among others, present learning disorders. of written language.

Reality that constitutes an object of attention for the United Nations Educational, Scientific and Cultural Organization by making clear, as a goal to be achieved by 2030, the proposal of inclusive and effective learning environments for all that contribute to better that promotes sustainable human development.

This priority represents a political will of the Cuban State by making effective in the supreme legal norm, the Constitution of the Republic of Cuba (2019), its responsibility with this guarantee; where the third improvement developed by the National Education System recognizes, as a requirement associated with it, the quality of educational attention to diversity.

In correspondence with this, the specialized services offered by Speech Therapy, as an academic and scientific discipline, for the study and care of students with dyslexia and dysgraphia, expresses a development that is strengthened as a result of the theoretical-methodological contributions proposed by the medical, psychological, and pedagogical sciences, which, among others, formulate the need to continue systematizing the body of knowledge achieved to care for the diversity of children, adolescents, and young people that includes it.

treatment, evaluation and monitoring management to ensure the system of specialized influences aimed at students with disorders in learning written language.

Model that simplifies its characteristics according to the synergy it establishes, the

theoretical component and the practical component, and defines as essential relationships those that are coordinated between prevention, early stimulation and language development, together with those that are formalized between specialized care and the educational inclusion process.

The aforementioned arguments, together with the exploratory investigations, allowed us to determine the strengths of speech therapy care for students with dyslexia and dysgraphia:

- the methodological improvement that speech therapy groups are currently developing in each of the municipalities of the province,
- the presence of professional development programs that address, for such users, content associated with the aforementioned care.

A theoretical-practical performance is revealed in speech therapist teachers with insufficient levels of didactic-methodological contextualization for speech therapy care for students with dyslexia and dysgraphia, in educational institutions in the province.

In correspondence with this, the objective of the scientific article proposes to analyze speech therapy care for students with dyslexia and dysgraphia in the province of Pinar del Río; research that was developed that is carried out in the research project "Comprehensive and Community Speech Therapy Care"; in which the development of research and educational exchange is identified as one of its objectives and includes, as one of the lines associated with it, disorders in the learning of written language (Valdés, et al., 2016, p. 5); Therefore, providing answers to the problems that arise in contemporary speech therapy care represents one of its purposes.

## MATERIALS AND METHODS

The diagnostic study was developed during the 2019-2020 academic year, in the province of Pinar del Río, with an intentionally selected sample, which grouped 14 speech therapist teachers and 29 students with dyslexia (Consolación del Sur and Pinar del Río municipalities); all of which was institutionalized in 11 Primary Education schools in the territory.

The diagnostic study was carried out with a descriptive nature and the materialist dialectical approach was assumed in the methodological orientation to guarantee the study of the speech therapy care process for students with dyslexia and dysgraphia according to its genesis, its internal and external contradictions and mediated by the selection and application of methods at the theoretical level, the empirical level and mathematical statistics.

The analytical-synthetic methods were selected as theoretical level methods, which were used during the process of consultation and assessment of the consulted references, in the application of other methods of scientific knowledge and in the diagnostic results to specify how it is and manifests itself. speech therapy attention in the acting model of its realization; plus the inductive-deductive that allowed the formulation of generalizations, which in this purpose, facilitated the expression of the regularities regarding the studied process.

Document analysis was defined as empirical level methods, with the purpose of verifying the behavior of speech therapy care for students with dyslexia and dysgraphia from the organizational, exploratory, treatment, evaluation and follow-up direction, on which the acting theoretical-practical implementation.

Accordingly, the study of the ministerial resolutions that endorse the care, the psychopedagogical characterizations and the speech therapy files of students with

dyslexia and dysgraphia were considered as documents for analysis.

For its part, scientific observation of speech therapy classes was intended with the purpose of verifying the didactic-methodological update that the speech therapist teacher has to direct speech therapy attention to students with dyslexia and dysgraphia; while, the interview with the speech therapist teachers was applied with the objective of investigating the behavior of the attention to the students and the treatment that since the permanent training has deserved the updating of such knowledge.

In addition, the index calculation was used in the mathematical statistical processing of the information to assess the process of speech therapy care for students with dyslexia and dysgraphia.

In general, the implementation of the related methods contributed to the theoretical and empirical characterization of the object of study; where the following were specified as indicators for the study:

- Level of didactic-methodological knowledge of speech therapist teachers aimed at the organization, exploration, treatment, evaluation and monitoring of the system of speech therapy influences.
- Level of application of didactic-methodological knowledge of speech therapist teachers aimed at the organization, exploration, treatment, evaluation and monitoring of the system of speech therapy influences.
- Level of perception, affective-emotional significance and professional performance of speech therapist teachers directed at the system of speech therapy influences.

## RESULTS

Speech therapy care as a specialized process is related to the object of the profession, mode, sphere of action and field of action of the speech therapist teacher; that in terms of results specifies "knowing", "doing" and "being", as a whole, "with what", "how" and "where" of speech therapy work.

Given this recognition, speech therapy care for students with dyslexia and dysgraphia synthesizes the specialized process managed by the speech therapist teacher in educational institutions as a result of the level of knowledge, its applicability, and professional attitude aimed at expanding the system of specialized influences. for prevention, correction-compensation and stimulation of the development of written language learning; with a multi-interdisciplinary and intersectoral approach.

Correspondence that allowed us to characterize the current state of the process of speech therapy care for students with dyslexia and dysgraphia, taking the model of speech therapy care in the nation as a starting point for the study.

This showed that the speech therapy model was represented with an ontogenetic, preventive, corrective-compensatory, communicative, activity, personality and social integration and educational inclusion approach and defined human communication and language (both oral and written). ), to speech, voice and alternative and augmentative communication systems as its basic concepts.

Concepts that founded contemporary speech therapy care from the contributions of Cuban educational work, the medical work of Dr. Cabanas and the psychopedagogy of Vygotsky and followers, and contemplated health-disease, ontogenesis- dysontogenesis , growth-development, pathology-disorder, disability -handicap, prevention-attention,

stimulation-intervention, communication-activity, teaching-development, real-potential, correction-compensation, risk-quality of life, unity-diversity, as well as reflection and personality as part of its system categorical.

On the other hand, the practical component integrated two dimensions, educational and health, and included the execution of preventive, diagnostic and care actions as the indicators to consider; influences that were institutionalized in the care network available between the ministries of education and public health.

It was confirmed in the documentary analysis that the theoretical and practical properties with which institutional and specialized speech therapy care was implemented in the province of Pinar de Río correspond with its legal framework.

It ratifies the authorization of the speech therapist teacher's job position in educational institutions, whose implementation scenario is preferably offered in educational contexts associated with early childhood, primary education and special education. This allowed us to identify that, in the provincial context, students with dyslexia and dysgraphia are not registered in special education institutions, nor have they been diagnosed by the Diagnostic and Orientation Center; and the aggravated forms of expression of dyslexia and dysgraphia were considered non-existent.

The theoretical, didactic and practical scope with which the processes are modeled was verified in the documents that govern the methodological work in educational institutions; where the quality of the process, preparation and professional pedagogical performance were established as requirements of the Cuban educational system and included, as fundamental themes for methodological preparation: comprehensive diagnosis, differentiated work and attention to individual differences.

In the related normative reference, insufficiencies were found in the description of the speech therapist teacher's teaching and scientific-methodological duty; However, the conception of didactic-methodological actions aimed at the organization, exploration, treatment, evaluation and monitoring was deduced from the inclusion, in the resolution, of the documents that regulate Cuban speech therapy care.

For its part, the study carried out on a sample of 29 psychopedagogical characterizations of learners with disorders in learning written language identified an adequate level of knowledge about the semantic differential of learners with dyslexia and dysgraphia; since in 100% of the characterizations their type was nominated according to the traditional classification criteria (dyslexia of the acoustic type 63% and 37% optical and dysgraphia of the acoustic type 46%, optical 26% and motor 28%).

On the other hand, the description of the variabilities in the linguistic, cognitive, affective and social development that generated their needs for educational support were insufficiently described in the differentiating report, as well as the comorbidity of symptoms that coexist in students with such speech therapy diagnoses.

Analysis that revealed that 69% of the characterizations were argued by disjointed communication between the educational agents involved in the diagnosis process; where in nine characterizations (31%) the results of the psychopedagogical, pedagogical and speech therapy evaluation were integrated; in which the behavior of the sensorimotor and semantic level was included, but singled out the student with a disorder in learning written language.

In the speech therapy care strategies consulted, in the speech therapy files, the specificity of the scope supported by the general lines of care for students with

dyslexia and dysgraphia was evident; where the level of knowledge, and application, didactic-methodological for psycho-pedagogical mediation, multi and interdisciplinary advice, the provision of organizational, technological and curricular resources, as well as training-preparation and intersectoral cooperation, between agents and agencies to be involved, were insufficiently represented, or poorly suited, in the tasks that were defined for the general lines of attention. Such behavior was evident in the planning (system that is part of the components that make up the speech therapy file) and in the observation of the speech therapy classes; where although 100% of the students attend care in person, that is, directly, preferential treatment was directed towards the technical part of reading and writing and didactic and technological resources were included to compensate for the written information by other complementary audiovisual information (31%); as well as organizational resources aimed at suppressing the fatigue that the act of reading and writing can cause in students with dyslexia and dysgraphia, actions that were insufficiently informed in the conception of speech therapy strategies as a result of projective speech therapy mediation.

100% of the observed teachers demonstrated a positive affective-emotional perception and significance in relation to respect for the teaching-learning of students; although the level of action, in 71% of them, was oriented with a disjointed performance in the implementation of the system of logopsychopedagogical-didactic influences for the enhancement of their learning conditions.

In this sense, the level of didactic-methodological knowledge, its level of application (both with an index = 0.21) and performance (with an index = 0.38) in the planning and observation of the activities were assessed as inadequate. speech therapy classes.

The interview carried out with the speech therapist teachers approved the established indicators as not being adequate; where the level of application of didactic-methodological knowledge represented the indicator with the lowest index (with an index = 0.18).

In this sense, they recognized that students with dyslexia and dysgraphia coexist with access needs to school learning; where speech therapist teachers who have a creative development in the performance of their functions managed to express theoretical-practical knowledge with higher levels of didactic-methodological contextualization (28%).

It was verified in the two speech therapy groups consulted that teaching and scientific methodological actions are not always addressed that allow the contextualization of speech therapy care specifically for students with dyslexia and dysgraphia, or on the contrary, that the uniqueness of the students' learning is delved into. as a result, among others, of speech therapy case studies.

100% of those interviewed expressed the needs for professional improvement and methodological preparation; and stated as distinctive aspects linked to their professional activity: "that specialized attention must describe didactic proposals oriented, particularly, to the methods, means and evaluation of learning..." and "that the multi- and interdisciplinary interventions aimed at care". In general, speech therapy care for students with dyslexia and dysgraphia was characterized by the presence of inaccuracies associated with the theoretical and practical implementation of the care model, and by didactic-methodological insufficiencies in the institutional and/or specialized management; results that made it possible to identify, as a cause of the inappropriate behavior of care, the non-existence of a didactic-methodological component in the speech therapy care model in the Cuban nation.

## DISCUSSION

The need to delve into previous research that has impacted the process of speech therapy care for students with dyslexia or dysgraphia, or an associated aspect, was corroborated by the results confirmed in the diagnosis made, a process that, in the Cuban nation, impacted by the presence of different scientific results that contributed to the identification of the biological and behavioral markers of dyslexia (Ramírez, 2012), to the system of speech therapy procedures for the care of students with manifestations of dyslexia and dysgraphia (Lores, et al. , 2014); to the teaching of reading and writing (Puñales, et al., 2017), to the comprehensive intervention of dyslexia with a cultural-historical approach (Zuleta, 2020), among others.

Such references demonstrated their possibilities of articulation with the theoretical and practical components of the care model; However, aligning them to the variabilities in the learning development of students with dyslexia and dysgraphia represented, in the studies involved, a must of educational research, since a conceptual panorama was evident that still does not recreate the best practices associated with the implementation of the set of systematized theoretical-methodological knowledge.

In particular, the basic starting concepts, from the related references, found expression in speech therapy care; so, the particular theoretical properties were reflected in speech therapy practice; where it should be noted that although the preceding studies contributed to the description of the causes, the observable manifestations and the attention, which showed the existence of ambivalences, which underlie the conceptual delimitation: students with dyslexia and with dysgraphia.

All of which was confirmed in the studies directed by Puñales, et al. (2017) who agreed that the name of the category learners with learning problems, learning

difficulties, learning disorders, among others, continues to be controversial (p.130); where dyslexia and dysgraphia were classified in Cuban speech therapy care as communication and written language disorders; in which, dyslexia defines the specific, stable and partial disorder of the reading process and dysgraphia, as the specific and partial disorder of the writing process; while "alexia" and "agraphia" name its most aggravated forms of expression.

In correspondence with this, Ramírez (2012), verified as a result of the diagnosis based on school reports the high prevalence of the specific learning disorder, particularly dyslexia, in the Cuban child population (5-17%) (p.9); while those carried out by Lores, et al. (2014), demonstrated as a regularity of speech therapy practice:

the presence of (...) written language disorders that do not present a completely structured picture of dyslexia and dysgraphia, as they have certain symptoms of the disorder, which is why they are called children with manifestations of dyslexia and dysgraphia. These require an organization of the corrective-compensatory process in a differentiated manner. (p.6)

The previously identified regularity regarding speech therapy practice for the care of students with written language disorders shows coincidences with the studies carried out by Valdés et al. (2019) who referred, as a requirement of professional speech therapy activity, "the development of professional skills as an essential core of competent professional performance" (p. 512), impacts that enable competent professional performance to address support needs. educational in students with dyslexia and dysgraphia, as a reflection of the properties and qualities inherent to the profession and the way in which the theoretical, didactic-methodological and practical knowledge of the speech therapist teacher works in his or her performance towards attention.

Zulueta's (2020) studies demonstrated the related need when considering the accumulation of data provided by educational research to guide, not only from the theoretical and practical, but also, "methodologically to contribute to the comprehensive development in the attention, with a cultural-historical approach" (p.3).

In another order, the constant growth expressed in neurodevelopment research, directed by the National Center of Neuroscience of Cuba, has opened new paths for the understanding of the concept of neuroplasticity from the precept of a more effective and differentiated teaching. Scenario in which new research trends on dyslexia recognize the need for neurodevelopment training for teachers (Barba, et al., 2019, p.421)

For its part, the Cuban nation demonstrates its privileged position by having an educational system aligned with the development of neuroscientific research aimed at caring for students with learning disorders and for which it was recognized, in the third improvement developed by the Cuban Educational System, the positive influence exerted by networking based on educational processes; management that is genuine, in speech therapy care, due to the heterogeneity of the scientific sciences that are interrelated and due to the uniqueness of the system of speech therapy influences that requires attention to students with dyslexia and dysgraphia.

In general, the analysis carried out confirmed that the attention process studied, from a didactic-methodological perspective, is novel.

Which specifies as characteristics to model, with a projective nature, the network work for the management of the multi-interdisciplinary and intersectoral approach of the process of care for students with dyslexia and dysgraphia, the foundation of the learning category as part of the categorical system and the representation

of a didactic-methodological component that establishes coordination relationships between the theoretical and practical component of the acting attention of realization.

"Networking is postulated as a key methodology for the promotion of childhood" (Martínez and Azcona, 2020, p.39) and it is emphasized, "that it is also a concept associated with the society in which man develops." " (Vidal et al. 2011, p.372).

This is why networking would represent the management mode that, from speech therapy care, would articulate the inter-institutional, intra-educational , inter-educational and community coordination relationships through the institutional and/or specialized management with which the care process is developed. ; all of which would simplify the didactic-methodological duty of speech therapy care for students with dyslexia and dysgraphia. Relationships that were demonstrated in the studies directed by Vázquez and Conill (2021), which demonstrated, "as a characteristic of speech therapy care, the intersectoral and multidisciplinary link, oriented towards the community" (p.3).

Inherent in speech therapy care is the creation of a unique system of essential concepts that delve, from a biopsychosocial perspective, into the regularities associated with the stimulation and development of learning to read and write, in the partial and aggravated forms in which they occur. The language disorders associated with it are presented, as well as the significant signs of variation that precede the process of learning written language; to adopt from a speech therapy perspective contemporary analyzes associated with phonological nature, neurobiological origin and educational support needs.

All of which results in the inclusion of strategies aimed at satisfying the basic needs of learning, understanding, participation and creation so that the



student with dyslexia and dysgraphia learns to live, first with the condition, and subsequently learns to live with it successfully.

In this way, the knowledge, procedures and values that concern the speech therapist teacher are deposited in specialized care as an expression of the human well-being of the one who teaches and also the one who learns.

Despite this, learning, implicitly and inherently in each of the general and essential concepts assumed by the acting model of realization, resulted in the presence of studies that made it possible to define it as part of its categorical system, which represents for the attention to students with disorders in learning written language, their uniqueness.

Likewise, the need to apply a system of speech therapy influences during all formative stages was identified to the biopsychosocial diversity of students with the coherent direction of the comprehensive method for their care.

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The authors declare not to have any interest conflicts.

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The authors participated in the design, analysis of the documents and writing of the work.

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