

Chapter # 13

OPINION SURVEY OF TEACHERS OF DYSLEXIC SCHOOLCHILDREN REGARDING LEARNING SKILLS

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ABSTRACT

The aim of this study was to characterize the opinion of teachers of students with dyslexia in a specific questionnaire on learning skills. 74 teachers of Brazilian schoolchildren with dyslexia participated, aged from 9 years to 10 years and 11 months from the 3rd to the 5th year of Elementary School I. The teachers answered the Learning Skills Questionnaire, composed of items: attention skills; visual processing skills; auditory processing skills; logical-mathematical reasoning skills; motor skills; behavioral skills. The questionnaire was filled out by teachers, with responses scored on a scale from 0 to 4 points (Likert Scale). Data for this study were collected from March 2019 to March 2020, before the start of the COVID-19 pandemic in Brazil. The results were analyzed statistically indicating that teachers answered "rarely" and "sometimes" for all categories, except for category behavioral, which most answers were "never". There was also an indication of "I don't know" for all categories, suggesting that teachers' lack of knowledge regarding behaviors aspects of dyslexic's schoolchildren. The results allowed us to conclude that teachers still need of information about how schoolchildren with dyslexia learn to read, since the results "rarely" and "sometimes" were presented in all categories of academic learning.

Keywords: dyslexia, learning, educational measurement.

1. INTRODUCTION

Dyslexia is described as a difficulty in learning to read and affects 5-12% of schoolchildren (Norton, Beach, & Gabrieli, 2015). Research has reported that reading is a complex task, requiring the integration of multiple visual, linguistic, cognitive and attentional processes (Ziegler et al., 2008). Due to this diversity of manifestations, it is necessary to use procedures, such as questionnaires, in order to verify teachers' opinions on the potential academic markers for this population. The inability to read and understand, present in students with dyslexia, is one of the greatest obstacles to learning, leading to serious educational, social and emotional consequences (Fletcher, 2009).

The study was designed due to the diversity of the findings in the literature about conceptions of dyslexia by elementary school teachers. Although the use of questionnaires is usual in clinical practice, in the educational context, there are still few Brazilian studies about the opinion of teachers about the educational performance of students with dyslexia.

In this way, this study presented as a research question how students with dyslexia are seen by their teachers, and it also makes possible to observe the knowledge of teachers about this condition.

2. BACKGROUND

Dyslexia is defined as a specific learning disorder with impairment in reading, which can range from problems in word reading accuracy, reading speed, or reading fluency and comprehension (American Psychiatric Association, APA, 2014). Regarding the cause of dyslexia, there are different theories that justify reading difficulties by relating them to failures in phonological, visual and cognitive processes (Reid, 2016), expanding the possibility of characterizing this population, with several theories suggesting possible causes of dyslexia. According to Reid (2016), developmental dyslexia is characterized by differences in individual processing, often characterized by difficulties presented at the beginning of literacy, compromising the acquisition of reading, handwriting, and spelling.

However, studies have pointed to a much broader and more heterogeneous profile. Among the manifestations, studies indicated the presence of phonological deficit (Vellutino, Fletcher, Snowling, & Scanlon., 2004), temporal auditory processing (Tallal, 1980), and speech perception (Mody, Studdert-Kennedy, & Brady, 1997). In addition, there are also studies that refer failures in sensorimotor tasks (Bucci, Brémond-Gignac, & Kapoula, 2008), motor coordination and balance (Fawcett & Nicolson, 1999).

In this way, students with dyslexia may present a diversity of manifestations depending on its subtypes, which may be phonological, visual or mixed (Facoetti et al., 2003; Galaburda & Cestnick, 2003; Ramus et al., 2003), but regardless these subtypes there are changes in the mechanism of conversion of letters in their phonemic representations, resulting in slow reading fluency and changes in orthographic and calligraphic writing, reading comprehension and text production.

Thus, these difficulties impair decoding (letter-sound association); fluency (ability to read words and texts automatically); and comprehension (proficient reader) (American Academy of Pediatrics, 2009).

Consequently, the investigation of learning skills from the perspective of their teachers can collaborate in the identification of educational behaviors among dyslexic students, which in turn can help in the design of clinical and educational interventions, as well as guide the elaboration of orientation and training programs for the teachers of these students.

Despite the consensus in the international related literature (Wadlington & Wadlington, 2005; Snowling & Hulme, 2013; Washburn, Binks-Cantrell, Joshi, Martin-Chang, & Arrow, 2016) that the role of the teacher does not include diagnosing dyslexia, there is the idea that teachers need to have a minimum understanding of what dyslexia is and its manifestations, since the specific knowledge of what difficulties students with dyslexia present can help in the development of specific educational strategies that can minimize the impact of these changes on academic learning.

However, playing a key role in dyslexic students' educational path, teachers' attitudes, conceptions and knowledge about this diagnosis can contribute to early identification, effective teaching planning and referral to interdisciplinary diagnosis when these students do not respond to specific interventions in the teaching of reading and writing (Wadlington & Wadlington, 2005; Snowling & Hulme, 2013; Washburn et al., 2016). We emphasize that, in Brazil, the interdisciplinary diagnostic service, for the most part, is composed of speech Language Pathologist, Neurologists and Psychologists, with the rare participation of teachers.

Nevertheless, the role of the teacher is extremely important, especially with regard to the understanding of school difficulties, but going beyond, when we think of their work with students with dyslexia in the school context. According to Rohde, Barbosa, Tramontina, & Polanczyk (2000), interventions in the school environment are very important and, in this

sense, teachers should be guided and have knowledge about the special needs of these students to plan effective teaching strategies.

Knowledge about dyslexia, its manifestations and specific interventions are essential to ensure that these students have an adequate academic and socio-emotional development, and this can certainly be a facilitator of the academic learning process.

Stefanini and Cruz (2006) posited that it is important that teachers have a deeper knowledge about the causes of the students' learning problems and, even more, reflect especially on those that depend specifically on them, as teachers.

A study of Pereira, Siqueira and Alves (2011) aimed to investigate the practical-theoretical knowledge about developmental dyslexia of educators from public and private networks showed that most of them had knowledge about dyslexia, which allowed them to correctly identify the concept, its main characteristics, and its causes, thereby revealing that despite having formative knowledge about developmental dyslexia, the interviewed educators often sought to improve, through diverse sources of information. For the authors, these results reinforced the need for continuity of guidance programs in schools, incentives for the continuing education of teachers.

Likewise, in order to investigate the conceptions of elementary school teachers about school difficulties, learning disorders and dyslexia, Gonçalves and Crenitte (2014) conducted a study with 31 elementary school teachers from a city in the interior of the state of São Paulo. The results showed, in general, that the participating teachers demonstrated difficulties with defining the disorders, assigning their causes, and scoring their manifestations. When teachers were separated by type of school, public or private, and according to prior knowledge on the subject, no statistically significant difference was observed in most responses, which allowed the authors to conclude that the teachers in this study had a lack in their conceptual repertoire regarding school difficulties, learning disorders and dyslexia, and therefore needed guidance in relation to effective work with these students.

From the results of the studies presented above, it is possible to observe that there is a divergence of findings when it comes to the teacher's knowledge about dyslexia and its manifestations and this can be explained by the fact that training courses on this topic are not mandatory, since dyslexia is not configured within Brazil's National Special Education Policy (NSEP) agenda.

According to the NSEP's Perspective of Inclusive Education (Brazil, 2008), students with diagnoses of intellectual disability and/or autism spectrum disorder are part of the group that make up the conditions of Special Educational Needs, hence served by special education, but this group excludes students with dyslexia and students with attention deficit hyperactivity disorder (ADHD).

This is a point of reflection about Brazilian education. According to Lombardi et al., (2016) Inclusive Education has not occurred satisfactorily in Brazil because only a target audience is being contemplated with the resources defined by the Ministry of Education and Culture (MEC). The authors also pointed out that the citation in the MEC document of some clinical conditions such as dyslexia and Attention-Deficit/Hyperactivity Disorder (ADHD) is not clear, leaving scope for different interpretations (Lombardi & Mendes, 2013).

Buzetti, Giaconi, Del Bianco, & Capellini (2021) also stated that because students with dyslexia and ADHD present persistent learning barriers throughout their academic life, actions by the school team are necessary in order to share strategies that aim to facilitate their transition process through academic life and minimize the difficulties that occur during this teaching-learning process. These aspects reinforce the need for teachers to understand dyslexia

3. OBJECTIVE

To characterize the opinions of teachers of dyslexic schoolchildren, using a specific questionnaire on learning skills.

4. METHODS

This study was approved by the Research Ethics Committee at São Paulo State University “Júlio de Mesquita Filho” (UNESP), Marília, São Paulo, Brazil, under protocol nº 957.998.

A total of 74 teachers of schoolchildren with an interdisciplinary diagnosis of dyslexia participated in this study. The students were of both sexes, aged 9 years to 10 years and 11 months and from the 3rd to 5th year of Elementary School I.

As the teachers are not part of the diagnostic team, they were invited to answer a questionnaire, which aims to characterize the academic performance of students with learning complaints, from the teachers' point of view. For ethical reasons, teachers had their personal information kept confidential.

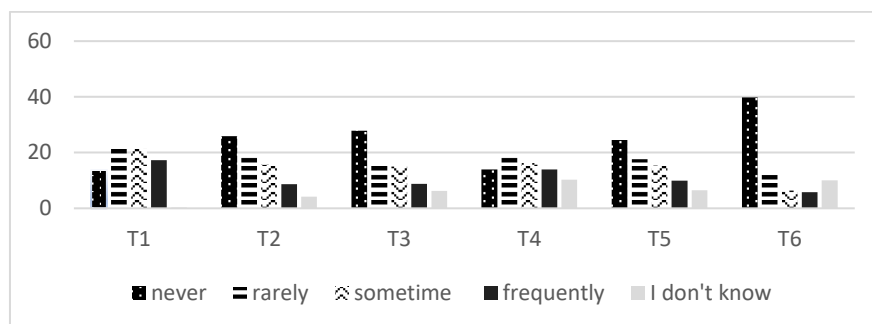
The teachers answered the Learning Skills Questionnaire (Capellini, Giaconi, & Germano, 2016), comprising six items: 1) attention skills (e.g., difficulty maintaining attention while performing school activities); 2) visual processing skills (e.g., difficulty copying drawings, shapes, and letters from a blackboard or book); 3) auditory processing skills (e.g., speech developmental delay); 4) logical-mathematical reasoning skills (e.g., difficulty in doing mathematical calculations); 5) motor skills (e.g., difficulty in fine or gross motor skills); and 6) behavioral skills (e.g., presence of agitated behavior in the classroom and at home). The questionnaire was completed by the teachers, without influence from the researcher, and the answers were marked on a scale of 0 to 4 points (Likert Scale), according to the possible responses of the instrument, namely “I don’t know”, “never”, “rarely”, “sometimes”, and “frequently”.

Data for this study were collected from March 2019 to March 2020 and therefore prior to Covid-19 pandemic in Brazil.

5. RESULTS

The results were statistically analyzed using the Statistical Package for Social Sciences, version 22.0. The significance level was set at 5%. Graph 1 indicates the mean of the distribution of the teachers' opinion in relation to each category, with the application of the Chi-Square test, all with statistically significant results (Graph 1).

Graph 1.
Distribution of frequencies of teachers' opinions for each category of the Questionnaire.
Chi-Square Test ($p < 0.05$).



According to the categories of questionnaire responses, it was possible to observe in Graph 1 that teachers responded “rarely” and “sometimes” for all categories, except for category 6 (behavioral), where most responses were “never”.

That is, teachers responded that they rarely or sometimes noticed that students with dyslexia had difficulties in attention skills, visual processing skills, auditory processing skill, logical-mathematical reasoning skills and motor skills.

There was also an indication of “I don't know” for all categories, suggesting that the skills present and investigated in the questionnaire are unknown to the teachers as a measure for analysis of their dyslexic students’ behavior.

6. DISCUSSION

A study (Dilnot, Hamilton, Maughan, & Snowling, 2017) carried out with parents and teachers indicated that the teachers' responses proved to be a strong predictor for the identification of difficulties in academic performance, since it demonstrated complaints regarding visual, auditory processing, logical-mathematical reasoning had a greater impact than other skills within the educational context. Our findings revealed that auditory and visual processing impairments were related to dyslexic schoolchildren (Snowling, Gooch, McArthur, & Hulme, 2018; Carroll, Mundy, & Cunningham, 2014).

Furthermore, a study (Verhulst, Koot, & Van der Ende, 1994) showed that speech, language, auditory and visual processing skills are closely associated with literacy, and dyslexics tend to present deficits in these areas since early childhood education, with a greater impact in the first years of literacy.

Among the findings of this study are dyslexic children’s failures in auditory and visual processing skills identified by teachers, which can be the cause of these schoolchildren's reading problems (Verhulst et al., 1994; Snowling et al., 2018; Capellini et al., 2016).

In addition, the literature (Carroll et al., 2014) describes that speech, language, auditory and visual processing skills are closely associated with literacy and that dyslexic children tend to present deficits in each of these areas since the preschool years, with a greater impact on the first years of literacy.

The results of this study show that the learning skills investigated in the questionnaire are not unknown by teachers, but there is no specific training for them about the observation of these skills in the context of the academic learning of dyslexic students. As posited by

Wadlington and Wadlington (2005) and Washburn et al. (2016), teachers' specific knowledge about what are the difficulties of dyslexic students is necessary so that the latter can be assisted in their development of reading and writing.

For a real inclusion of students with dyslexia, it is necessary to train teachers to understand the manifestations of dyslexia in the context of learning to read and write. Only in this way will it be possible to minimize the distortions that occur in the conception of dyslexia by teachers, as well as choose effective interventional strategies for teaching-learning, as proposed by Rohde et al. (2000).

The fact that students with dyslexia are not included as the target audience of Inclusive Education in Brazil, as reported in studies (Buzetti et al., 2021; Lombardi & Mendes, 2013; Lombardi et al., 2016), compromises the development of specialized training actions for basic education teachers. Consequently, teachers are not aware of early signs, manifestations, and educational and social behaviors of this population, which can be applied to the learning skills involved in the teaching-learning process, as presented in the results of this study.

However, it is necessary to highlight that the learning difficulties of the population of dyslexic schoolchildren is not indifferent to teachers. There are many doubts and anxieties on their part in relation to their performance with this specific learning disorder, as highlighted by Costa et al. (2013) and Lara, Tanamachi, and Lopes (2006). What is lacking is specific training or capacity-building to plan efficient educational strategies for the full development of reading and writing in the classroom, which was also highlighted by Pereira et al. (2011), and Gonçalves and Crenitte (2014).

7. FUTURE RESEARCH DIRECTIONS

As future implications, the results of this study indicate the need to propose training courses for teachers, with the aim that they better understand the performance of students with dyslexia and, thus, propose specific educational interventions in the classroom.

8. CONCLUSION

The results of this study allowed us to conclude that elementary school teachers of dyslexic students need clarification about the real difficulties presented by this population regarding learning skills, which was shown by the constant presence of the answers "rarely" and "sometimes" in all categories of academic learning skills.

It is important to highlight that these findings suggest a lack of support from Brazilian educational public policies guiding teachers to identify difficulties in learning skills.

Only by means of training and capacity-building courses with specific guidance about the characteristics and manifestations of dyslexic students in the classroom will it be possible to guarantee a better quality of educational life for these students.

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