THE STUDY OF THE PEDAGOGICAL ASSESSMENT INDICATORS OF READING DIFFICULTY IN 6-11-YEAR-OLD STUDENTS WITH DYSLEXIA

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Abstract

The study presented in the paper was motivated by the fact that there was no checklist available in the Georgian educational space for assessing reading difficulties (dyslexia) that would allow for the early identification of this problem. As part of the study, we reviewed 11 forms (checklists) of dyslexia assessment indicators used in the educational systems of various countries. These checklists are intended for teachers, parents, school psychologists, and students, and serve the identification of reading difficulties. Since the purpose was to develop a checklist of indicators for assessing reading difficulties (dyslexia) specifically for teachers, we selected relevant questions designed for educators and based our analysis on them to create an assessment tool.

The study was conducted at Tbilisi Public School # 173, the "International Academy Logos," and "Tbilisi Free School." Additionally, with the support of the "Association of Special Educators", the form for assessing reading difficulties (dyslexia) indicators was completed by special educators working in schools in Tbilisi and the regions. Various school teachers participated in the study via social media. Furthermore, 305 students participated in the study, of which 98 have dyslexia. Data processing was carried out using SPSS 23. It was confirmed that with the use of our checklist of 49 dyslexia assessment indicators, it is possible to identify the 6-11-year-old students (from the first to the fifth grade) who have dyslexia or reading difficulties.

Key words: *reading, reading components, dyslexia, dyslexia assessment indicator checklist*

Introduction

Reading difficulties are encountered more often than expected (Nelson, 2016). To eliminate or reduce reading disorder it is extremely important to detect it at an early stage (IDA, 2012). Those students who are lacking necessary reading skills face more general difficulties during academic performance and are at a high risk of dropout (Alliance for Excellent Education, 2002). Poor reading skills positively correlate with criminality (Center on Crime. 1997) and suicide (Daniel et al.2006). Most students who begin school studies under standard instruction and have poor reading skills inadequate for the corresponding level, reading disorder remains a problem (Shaywitz, & Fletcher, 1996; Juel, 1988; Torgesen & Burgess, 1998). According to the International Dyslexia Association, specific learning disorder is diagnosed in 6-7% of students (IDA, 2012). Out of them, 85% has difficulties in reading and understanding/processing of what has been read. It also happens that students with dyslexia are transferred to upper classes without any assessment or intervention.

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Reading skills are necessary for the acquisition of any kind of information, enrichment of vocabulary and development of imagination, which shows how detrimental dyslexia could be for a child's education and development.

Reading

Reading is a complex psycho-physiological process. The act of reading involves visual, verbal-motor, and verbal-auditory analyzers. Compared to oral speech, reading is a relatively recent and complex process. Reading begins with the visual perception of letters, their differentiation, and recognition. Based on this, the letters are related to the corresponding sounds (phonemes). In the process, the phonetic image is recognized, i.e., the word is read. Finally, the understanding of what has been read is achieved by relating the content of the word to its phonetic form. Two aspects can be singled out in the process of reading: the technical aspect, which implies the connection of the visual image of the written word with its pronunciation and the other, essential aspect, which implies the connection of the word's meaning with its phonetic form. These two aspects are closely interrelated. During reading, adults are only aware of the content of what has been read. The preceding psycho-physiological processes are unconscious and automatic (Learner, 1997).

The reading process comprises 4 stages.

The stage of mastering phonetic representation, or letter-sound correspondence (pre-syllabic stage):

The mastery of phonetic representation is acquired in the pre-alphabetic and alphabetic periods. At this stage, children analyze the flow of words and break them down into sounds and syllables. By isolating sounds from speech, children associate them with specific graphic representations – letters. Then, during reading, the child combines letters into syllables and syllables into words and, finally, relates the read word to the spoken word.

The stage of syllabic reading:

At this stage, the reading unit is the syllable. During reading, syllables quickly connect with the corresponding sound (phonetic) complex. However, the reading process is still analytical. Synthetic and integrated reading is not yet possible, so the reading speed at this stage is quite slow.

The stage at which the holistic perception method is formed:

This stage represents a transitional phase between the analytical and synthetic methods of reading. At this stage, simple and familiar words are read as a whole, while complex and unfamiliar words are still read syllable by syllable. The child often alters words or the endings of words. At this stage, the ability to infer meaning plays a significant role.

The synthetic reading stage:

This stage is characterized by a holistic perception of reading. The technical aspect of reading does not pose a difficulty; the main task is to comprehend what has been read. At this stage, the reader not only synthesizes words within sentences, but also synthe-

sizes sentences into phrases and the overall context. The understanding of the content improves with the refinement of the lexical and grammatical aspects of speech. A key condition for the successful acquisition of the reading habit is the formation of oral speech, the development of phonetic-phonemic (differentiation of phoneme pronunciation, phonemic analysis and synthesis) and lexical-grammatical structures, the development of spatial representations, visual analysis and synthesis, and visual memory (Learner, 1997).

Reading is not mastered naturally. It needs to be learned. Many skills and abilities underlie the reading process, such as working memory, spatial and visual skills, the ability to recognize phonemes, phonemic analysis, and synthesis. In order for reading skills to be fully developed, it is essential to promote the development of the following five fundamental components:

1. Phonological skills;
2. Letter recognition/recognition of the alphabet;
3. Existence of vocabulary;
4. Fluent reading;
5. Ability to comprehend and analyze the read text (ისაკაძე & ლომიძე, 2020).

Dyslexia

The development of reading skills does not always proceed uniformly. Sometimes, difficulties and delays arise, which are referred to as dyslexia. The term “dyslexia” is of Greek origin, where “dys” means “difficult “ and “lexis” refers to “words” (გაგოშიძე, 2007). The term was first used by the German ophthalmologist Rudolf Berlin, who noticed that some of his adult patients, despite not having vision problems, struggled to read printed text correctly. He assumed that the issue was related to physiological changes in the brain (Berlin, 1887). In the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013), the diagnosis of dyslexia is given under the name “Specific Learning Disorder,” with a subtype being reading disorder. Specifically, to diagnose dyslexia, an additional code (315 (F81.0) is provided, which is marked if problems are observed in the following areas:

- Accurate word reading;
- Reading speed or fluency;
- Comprehension of what has been read.

It is particularly noteworthy that the mechanisms and precursor skills underlying dyslexia, the development and existence of which are essential for mastering reading skills, can often be the first difficulties that teachers notice. Such symptoms in preschool-aged children may manifest as a lack of interest in language-related games or a deficiency in the ability to learn rhymes. Children may mispronounce words, have difficulty remembering numbers, the days of the week, or letters. Children who go to kindergarten may be unable to recognize or write letters, their own name, or may use an invented writing system. They may also struggle with syllable segmentation or recognizing rhyming words. A significant

problem is the perception of the letter-sound connection and the identification of phonemes. Students in the first to third grades may find reading challenging and attempt to avoid the process. In subsequent grades, we may encounter mispronunciation of polysyllabic words, omission of syllables, and confusion between similar words. They often struggle to complete tasks within a specific time frame. In adolescence, decoding words is no longer an issue, but reading is still slow and complicated. They continue to exhibit writing errors and read the text word by word. They find it difficult to extract the correct meaning from the text. Throughout all stages of life, we see attempts to avoid activities that require the process of reading or writing (DSM V).

In the International Classification of Diseases, 11th edition (World Health Organization, 2019), learning disability is categorized under neurodevelopmental disorders as a learning disorder. Its subtype is reading impairment. The description of the disorder includes characteristics such as significant and persistent difficulties in academic reading skills, including accurate word reading, reading fluency, and comprehension of the text. The classification states that an individual's reading skill deficit should be clear and distinct from the reading skills characteristic of their chronological age and the overall level of intellectual functioning, and it should hinder the individual in academic or occupational activities (ICD 11).

Norm-referenced tests are used to assess dyslexia, such as the widely used Woodcock-Johnson Tests of Reading Mastery (Woodcock, 1987), which include the TOWRE (Test of Word Reading Efficiency) (Torgesen, Wagner, & Rashotte,1999), a test of reading skills and word reading efficiency. TOWRE assesses the speed and accuracy of word reading. Pseudo-words (as measures of phonological decoding) are presented in a sequential list format with increasing difficulty, and students have 45 seconds to read them.

In Georgia, psychiatrists use the WRAT-4 – Wide Range Achievement Test for diagnosing dyslexia (Robertson & Wilkinson, 2006). The same test is also used by neuropsychologists for assessing dyslexia, although they do not make a formal diagnosis; instead, they conclude with a note stating: "Dyslexia is likely." The test measures general academic skills in reading words, sentence comprehension, correct spelling, and mathematical calculations. Norms are provided for both school-aged children and adults, allowing assessment of individuals of any age.

The WRAT-4 consists of four subscales:

- The word reading subscale measures the ability to decode letters and words;
- The sentence comprehension subscale evaluates the individual's ability to derive meaning from the read words, comprehend the idea and information presented in a sentence;
- The spelling subscale assesses the individual's skill to encode sounds in writing and transcribe dictated letters and words;
- The mathematical calculations subscale measures the individual's ability to count, recognize numbers, solve simple oral math problems, and compute written problems

across various branches of mathematics – arithmetic, algebra, geometry, and higher-order operations.

After conducting the test, a compiled reading score is generated, which includes scores for word reading and sentence comprehension subscales (Robertson & Wilkinson, 2006). Administering the WRAT-4 takes 15 minutes for children and 30 minutes for teenagers and adults, which adds to its effectiveness. It can be used individually or in groups, in mathematics and writing modules. The WRAT-4 test is noted for its reliability. Recent studies confirm its reliability in specific populations, particularly in individuals with autism spectrum disorders (Jantz et al., 2015).

Dyslexia is predominantly diagnosed in students through the use of standardized tests mentioned above in various educational systems around the world. Such tests may assess reading, writing, cognitive skills (e.g., for phonological ability), etc. Nevertheless, there are still differing opinions on what the best approach is for assessing dyslexia (Tamboer & Vorst, 2015).

Studies have shown that dyslexia presents a significant challenge to public health worldwide, (with a prevalence of 7.10%, 95% CI: 6.27-7.97%), and it is more commonly found in boys than in girls (Yang, Liping & Li, Chunbo & Li, Xiumei & Zhai, Manman & An, Qingqing & Zhang, You & Zhao, Jing & Weng, Xuchu. (2022)). Interestingly, according to the meta-analysis presented in the article, there is no significant difference in the prevalence of dyslexia between logographic and alphabetic writing systems, nor between various orthographic depth alphabetic writing systems.

It should be noted that in our country, students who experience reading difficulties are often labeled as 'lazy.' As practice shows, there is a limited tendency in Georgia to consult a specialist for diagnosing dyslexia. Based on the above, the aim of our study was to create an assessment tool for teachers that would identify reading difficulties within the school environment. Such a tool has not existed in Georgia until now. This would allow for early identification of dyslexia and rapid relevant responses. Numerous studies highlight the advantages of early identification. It is crucial to accurately determine reading difficulties as early as possible so that children receive the necessary assistance (Colenbrander, D., Ricketts, J., & Breadmore, H. L. (2018). This is even more important considering the evidence that effective early support has benefits that are evident after more than ten years (Tymms, Merrell, & Bailey, 2017). Moreover, late interventions may be more costly than those initiated at an early stage (Wanzek & Vaughn, 2007).

In general, it is clear that dyslexia is a widespread problem, and its identification is advisable at an early age. The identification process should involve teachers, parents, school psychologists, special educators, and other individuals engaged in the child's education.

The study

The purpose of the study is to identify the indicators for assessing reading difficulties and create a checklist for dyslexia assessment, which will enable teachers or other interested parties to detect reading challenges in children aged 6-11.

Study objectives:

- Defining and analyzing the criteria for assessing reading difficulties based on the forms (checklists) of the indicators that are used in different countries for the screening of reading disorder;
- Creating a checklist of indicators to assess dyslexia.

Methodology:

Quantitative research and expert analysis.

The data collection procedure involved several stages:

- Familiarization with the checklists and their analysis;
- Thematic organization of dyslexia assessment indicators;
- Structuring the checklists of dyslexia assessment indicators – grouping questions, expert analysis, identifying overlapping questions, and creating a final version considering the peculiarities of the Georgian language.

Selection of study participants:

Targeted and random.

Target group – control group – random sampling (305 students).

Study participants:

- Teachers who teach from the first to the fifth grade or special education teachers who have diagnosed students with reading disorder/dyslexia and are familiar with their academic abilities;
- Teachers who teach from the first to the fifth grade. The students randomly selected by this category of teachers and whose academic abilities they are personally familiar with.

Evaluation of Reading Difficulty Assessment Questionnaires: A General Analysis

The rapid growth of the brain and its response to instructions make the period from birth to the age eight critical for literacy development (Nevills & Wolfe, 2009). Characteristics associated with reading difficulties are linked to spoken language. The difficulties of young children can be assessed through screening for phonemic awareness and other phonological skills (Sousa, 2005). Furthermore, when appropriate early intervention is implemented, it is not only more effective but also protects the child from the negative secondary outcomes associated with reading failure, such as lowered self-esteem and depression. Given this information, it is essential to screen students for dyslexia and related difficulties at the beginning of their academic careers (Eden, 2015). In the book “Straight Talk Reading,” Hall and Moats state that early identification is so important that the earlier the intervention occurs, the easier it is to remedy (Hall & Moats, 1999). Early screening identifies 85% of at-risk children even in kindergarten, and if intervention does not take

place before the age of eight, the likelihood of continuing reading difficulties in middle school is 75%.

After a detailed analysis of eleven forms (checklists) of dyslexia indicator checklists used by various developed countries, we categorized the main research issues and the questions common to all the reviewed checklists. Based on this consolidation, we initially identified 88 indicators; however, it was evident that the content of some questions was overlapping or redundant. Consequently, we turned to expert analysis. After considering the experts' opinions, we arrived at the final version of the checklist containing 49 questions. It should be noted that the processing of the checklists showed that many of the questions were aimed at evaluating the student's cognitive abilities. As far as we know, in our country, teachers do not study the assessment of cognitive abilities. Therefore, we removed the questions related to cognitive functions from the list of indicators. Naturally, when developing dyslexia indicator checklists, we took into account the peculiarities of the Georgian language, including its transparency—meaning that each letter corresponds to one phoneme (unlike, for example, in English, the language we used to analyze all the checklists)—as well as the information gathered during the practical work with children facing such difficulties. We matched the examples with the indicators based on the mistakes made by the children with dyslexia while learning the Georgian language. Examples of such indicators include: identifying different sounds in rhyming words, for example: ქარი (wind), კარი (door), ბარი (shovel); reading words by substituting them for the words composed of similar letters such as "შვილი" (child) for "შველი" (fawn), "ბალი" (cherry) for "ბოლი" (smoke), "ბალი" (cherry) for "ბაღი" (garden); reading letters in the wrong order "ივხი" (ivkhi) for "იხვი" (ikhvi), "წინგი" (ts'ingi) for "წიგნი" (ts'igni); interchanging words that sound the same, for example: "პირი" (mouth) for "პური" (bread), "მოცურდა" (it slipped) for "მოძულდა" (became fed up), "გარხევს" (will wave) for "გახევს" (will tear up), "ცხრის" (sieves) for "ცხვირის" (of the nose); using incorrect words (words that are not phonetically related) – for example: "ზვიგენი" (shark) instead of "ვეშაპი" (whale), or reading "კურდღელს" (to the rabbit) as "ბაჭიას" (to a bunny); mixing up similar-shaped letters – შ (sh), წ (ts), ძ (dz), ხ (kh), ნ (n), მ (m); omitting word endings – such as "ები" (-ebi), "-ენ" (-en), "-დან" (-dan), "-გან" (-gan)... and so on.

It is important to distinguish between transparent orthographic languages that clearly and transparently connect phonemes with graphemes, and those that feature a more complex relationship between spoken and written forms. The first category includes Italian, Spanish, German and Greek, while the second group includes French and English. The Georgian alphabet consists of 33 letters, which correspond to 33 sounds, and no more, unlike to English or German. We read aloud what we see on the page. In the Georgian language, there is no combination of letters that creates different phonemes, which makes it a transparent language. Research confirms that learning to read in such languages is relatively easier. Students tend to learn reading more quickly in languages where the correspondence between spoken sounds and their graphic representations is much simpler (IDA – International Dyslexia Association).

To conduct the study, we familiarized ourselves with the following dyslexia checklists:

1. **Dyslexia Teacher Observation Checklist, Alabama Dyslexia Resource Guide (PP. 10 & 11)**
2. **Dyslexia Initial Checklist**
3. **Dyslexia Children's Checklist for Parents (Swindon Dyslexia Centre)**
4. **Foundation Stage Dyslexia Checklist**
5. **Primary School Dyslexia Checklist (EXAMPLE BDA Quality Mark for Schools) (The British Dyslexia Association)**
6. **Secondary School Dyslexia Checklist (EXAMPLE BDA Quality Mark for Schools) (The British Dyslexia Association)**
7. **Pupil Checklist for Dyslexia Scotland**
8. **Teacher Observation Questionnaire for Dyslexia Texas Scottish Rite Hospital for Children – 2011**
9. **Checklist For ages 5-11 (Speech and Language UK)**
10. **Dyslexia Friendly Quality Mark for Individual Schools (For Guidance/Information Purposes) British dyslexia association 2015**
11. **Teacher Checklist for Characteristics of Dyslexia (Minnesota Department of Education)**

Development of a dyslexia checklist:

We used the following dyslexia checklists:

- Teacher questionnaire – **Teacher Observation Questionnaire for Dyslexia – Texas Scottish Rite Hospital for Children – 2011** is used in Texas. It is known as teacher observation questionnaire and does not identify the level of secondary education, grades or age. It starts from the kindergarten and the first school year and continues until postsecondary studies;
- Another one is the **Checklist for ages 5-11 (Speech and Language UK) used in the United Kingdom.** During the assessment, the teacher gives answers according to the following categories: No, Sometimes, Often;
- We also used an assessment instrument for teachers which is a resource of the UK Dyslexia Association. The Association uses different tests for primary and foundation stages. These are the **Primary School Dyslexia Checklist and** the **Foundation Stage Dyslexia Checklist.**

The analysis of the above dyslexia checklist highlights the possible difficulties and strong points that might be observed in the context of age development.

A part of the dyslexia checklist was derived from the **Teacher Checklist for Characteristics of Dyslexia** (Minnesota Department of Education). According to the authors, it was developed to assist education professionals to identify dyslexia, but should not be

used for diagnostic purposes. The dyslexia checklist should be completed within the six weeks after the first universal screening. The summarizing statements will help the team determine the sequence of the next steps and agree upon the information – "to what extent should I be concerned about this issue".

At the end of the study, with all the above taken into consideration, and after undergoing expert analysis, we ended up with a total of 49 questions in the dyslexia checklist.

Our study focused on 6-11-year-old students, from the first to the fifth grade (inclusive). The study was conducted at the end of the academic year, specifically, end of the second semester. This period was deliberately chosen because it was important for first graders

Diagram 1

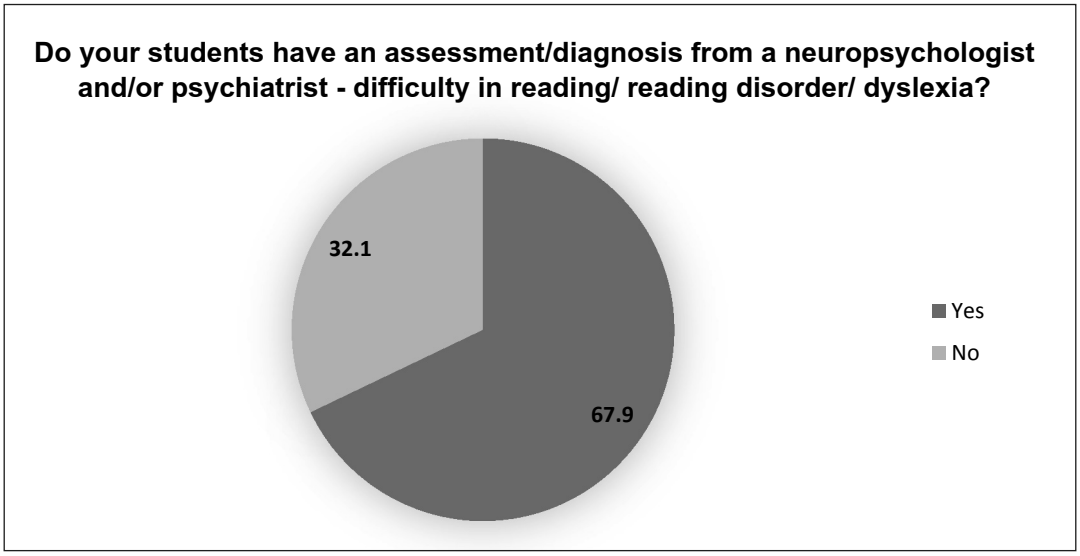
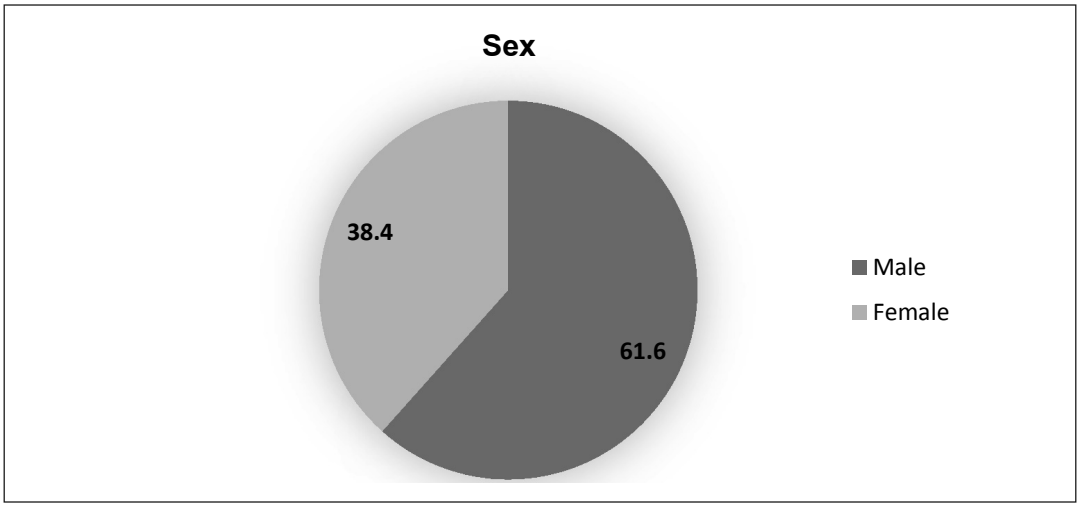


Diagram 2



to have completed their initial learning phase and fully master the alphabet. The dyslexia checklist was filled out by teachers and special educators for 305 students. Among them, 67.9% (207 students) had not received a specialist's assessment of reading difficulties, while 32.1% (98 students) had been assessed by specialists (see Diagram 1).

Percentage distribution indicators for typically developing students and the students with dyslexia Out of the total percentage of participants 61,6% (188 students) were boys and 38,4% (117 students) – girls (see Diagram 2)

The diagram below shows the students' distribution by grades: fifth grade – 26,2%, fourth grade – 20%, third grade – 20%, second grade – 20.7%, first grade12,5%. – (see Diagram 3).

The main task of the quantitative research was to determine whether the individual indicators of the checklist could distinguish the children with dyslexia from the children developing typically. We obtained statistically significant results ($p< 0.05$) after addressing the question at the level of individual grades. Later we measured the reliability of all the four scales for their diagnostic potential, summed up responses to questions and measured the reliability of the overall indicators.

To verify whether the items and scales were measuring the same construct, we used Cronbach's alpha and obtained a value of 0.958, which is a reliable indicator.

Statistically significant (primarily with a 98% confidence level, i.e., $p < 0.01$) positive correlation was found between each question and the diagnosis of dyslexia, as well as between the overall scores of the individual scales and the diagnosis of dyslexia, as indicated by Spearman correlation coefficient (see Table 1).

Diagram 3

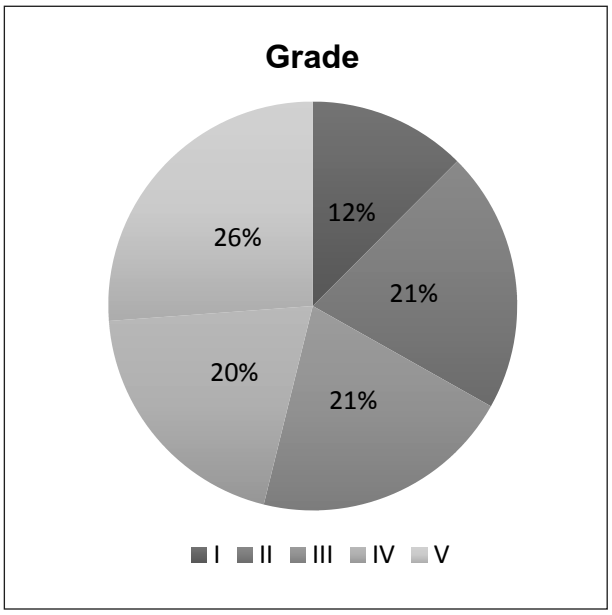


Table 1

Correlations [b]	Does your student have an assessment/diagnosis from a neuropsychologist and/or psychiatrist – difficulty in reading /reading disorder/ dyslexia	Phonological analysis	Indicators of linguistic problems: perception, context, reading comprehension	Limited vocabulary and oral speech	Indicators of orthographic problems	Total
Does your student have an assessment/ diagnosis from a neuropsychologist and/or psychiatrist – difficulty in reading / reading disorder/ dyslexia	1.000	.571	.508	.518	.489	.598
Phonological analysis	.571	1.000	.681	.691	.774	.892
Indicators of linguistic problems: perception, context, reading comprehension	.508	.681	1.000	.825	.759	.882
Limited vocabulary and oral speech	.518	.691	.825	1.000	.675	.897
Indicators of orthographic problems	.489	.774	.759	.675	1.000	.880
Total	.598	.892	.882	.897	.880	1.000

***. Correlation is significant at the 0.01 level (2-tailed).*

Our next task was to determine the levels for the overall indicator for each grade and each scale.

After that, we calculated the total for the fifth grade, as well as the mean and standard deviation for each scale for both typically developing and diagnosed children. Accordingly, we assessed the statistical significance which equaled 98%, meaning that the indicator was less than 0.01. **(**see Table 2).

Table 2

	Mean		Standard deviation		
	No	**Yes**	**No 2**	**Yes 3**	**Significance level**
Phonological analysis	5.65	11.24	4.39	2.03	0.000
Indicators of linguistic problems: perception, context, reading comprehension	2.96	5.79	2.31	1.45	0.000
Limited vocabulary and oral speech	4.20	8.14	3.27	2.05	0.000
Indicators of orthographic problems	4.39	7.97	3.32	1.94	0.000
Total	17.20	33.14	11.83	5.29	0.000

Based on the obtained data, we developed a table for the assessment levels of the checklist revealing the difficulties in reading and received the following distribution (numerical indicators): norm, expected and high probability. As shown in the table below (Table 3), we calculated the total for the students in the first, second, third, and fourth grades, as well as the mean and standard deviation for each scale. The difference turned out to be statistically significant with $p < 0.01$ for each scale.

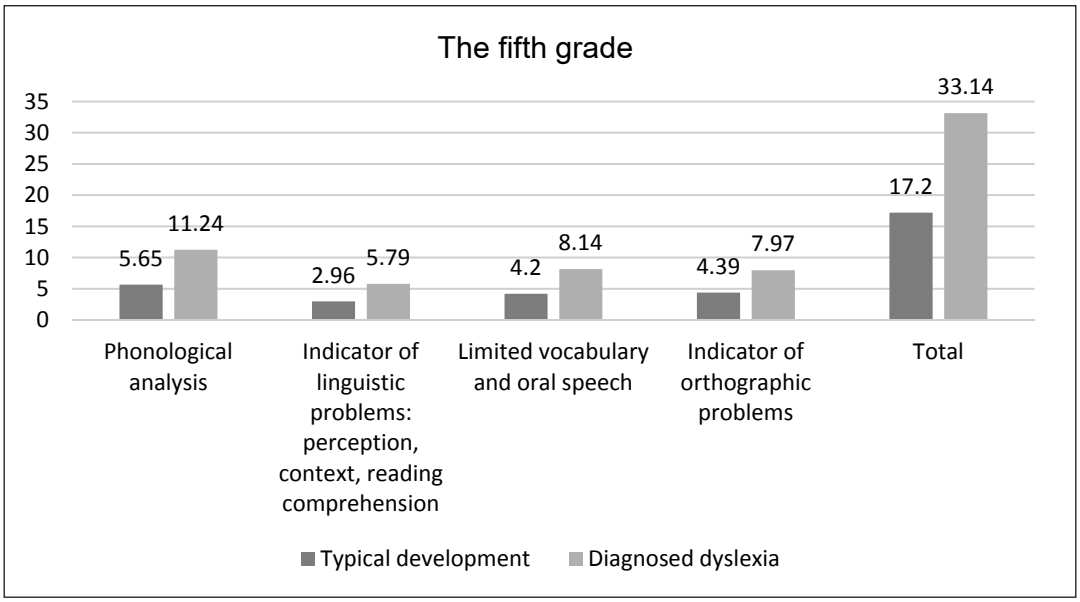
Table 3

	Mean		Standard deviation		
	No	**Yes**	**No 2**	**Yes 3**	**Significance level**
Phonological analysis	6.26	9.31	4.36	2.60	0.00
Indicators of linguistic problems: perception, context, reading comprehension	4.24	6.27	2.85	1.73	0.00
Limited vocabulary and oral speech	5.35	8.23	4.13	2.80	0.00
Indicators of orthographic problems	5.21	7.31	3.37	2.51	0.00
Total	21.06	31.13	13.58	7.50	0.00

The diagrams below show the distribution of numerical indicators for each scale.

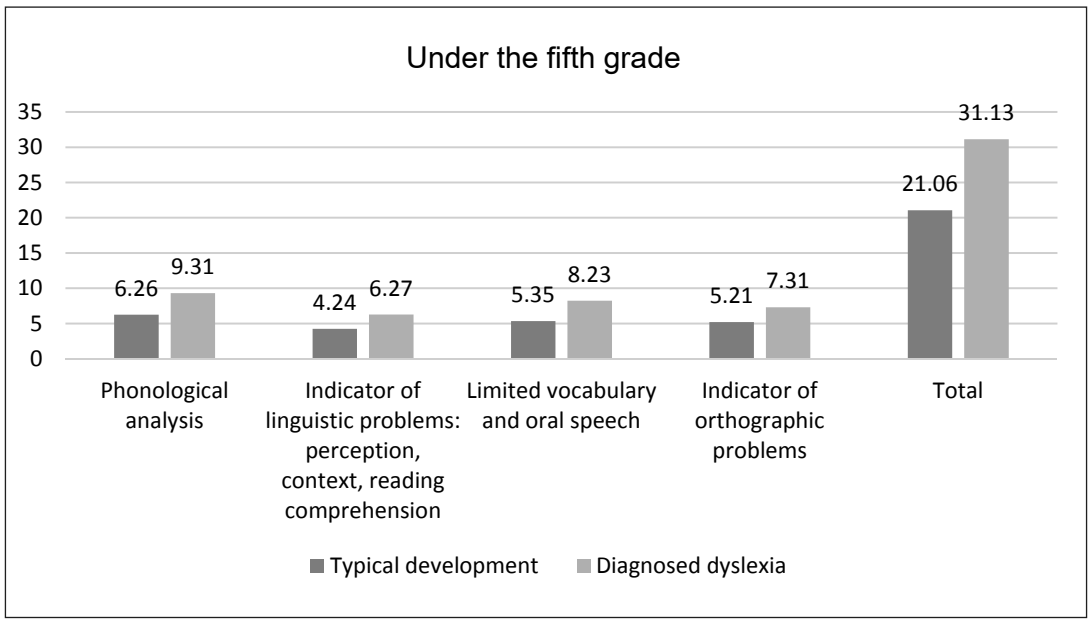
Diagram 4 shows that the primary challenges for fifth-grade students with dyslexia involved phonological analysis, as well as a limited vocabulary and oral speech. The least pronounced difficulty pertained to the indicators of language issues: perception, context, and comprehension (see Diagram 4).

Diagram 4



As seen from the fifth diagram, phonological analysis was a leading problem for students with dyslexia in the first, second, third, and fourth grades. They face almost equal difficulties with a limited vocabulary and oral speech as well as orthographic challenges (see Diagram 5).

Diagram 5



The sixth diagram shows that as indicated by four scales, the fifth-grade students with dyslexia exhibit two difficulties differentiating them from the first, second, third, and fourth-grade students with dyslexia: phonological analysis and orthographic difficulty. In contrast, first to fourth-grade students have slightly more issues with language difficulty indicators, including perception, context, reading comprehension, limited vocabulary and oral speech skills (see Diagram 6).

Diagram 6

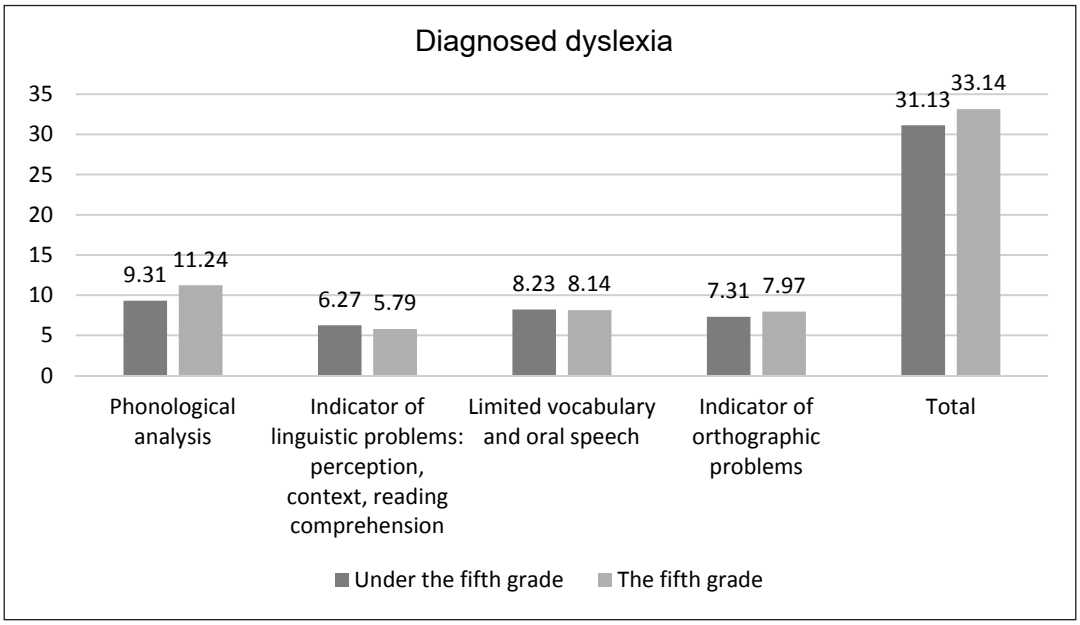
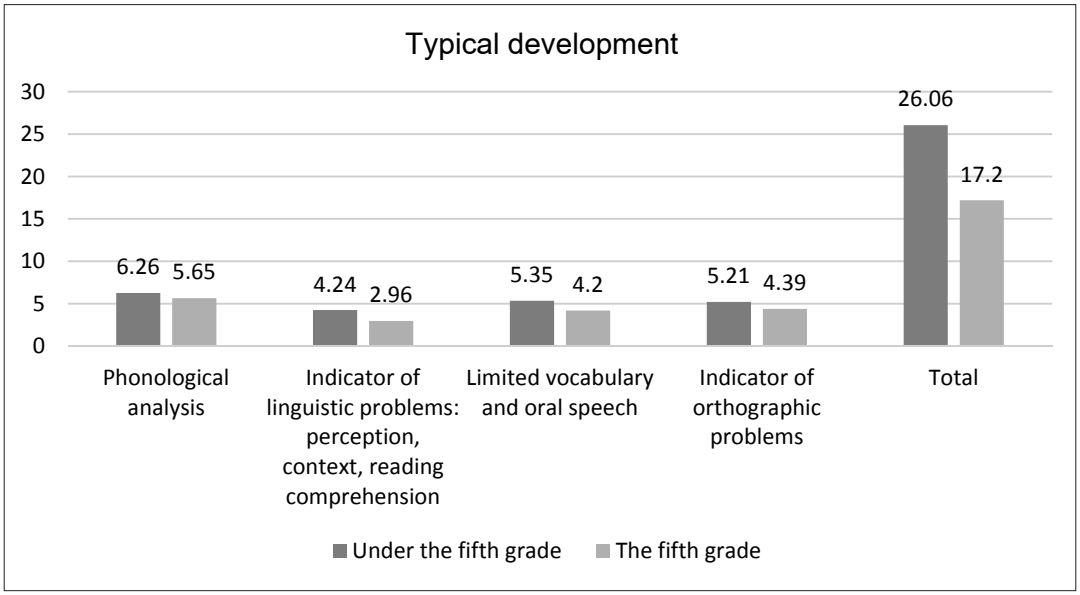


Diagram 7



Within the framework of the study, we compared across the four scales the data from fifth-grade students with typical development with the data of the first to fourth-grade students with typical development. It turned out that the students up to the fifth-grade score higher on all four scales, which indicates greater challenges compared to the fifth graders. However, apart from the indicator of linguistic problems, which includes perception, context, and reading comprehension, the differences across the other three scales are negligible (see Diagram 7).

The study also showed that, both in the typical development group as well as in the group of diagnosed students, a statistically significant difference was observed only in the phonological analysis scale between the fifth grade and lower grades in the case of typical development (significance level – 0.043, which is lower than 0.05.) This indicates the importance of phonological analysis in the case of dyslexia, which is supported by several other studies. Furthermore, this strongly indicates that phonological analysis is associated with age (see Table 4).

Table 4

	Typical development	Diagnosed students
Phonological analysis	0.043	0.407
Indicators of linguistic problems: perception, context, reading comprehension	0.126	0.957
Limited vocabulary and oral speech	0.204	0.579
Indicators of orthographic problems	0.080	0.493
Total	0.071	0.454

The consistency of the data indicates the validity of the checklist assessing dyslexia.

We firmly believe that this resource (the checklist of indicators assessing dyslexia) developed by our team will be very useful for teachers, psychologists, special educators, and other interested parties, and will further simplify the identification of reading difficulties in children. This, in turn, could serve as a prerequisite for early intervention, which can be considered the best decision made for the benefit of children.

Conclusion

To conclude, dyslexia is a significant challenge for students and not only for them. It can greatly influence students' academic development and, subsequently, their quality of life as of individuals and citizens. This, in turn, represents a broader, state-level issue. Therefore, we believe that education policy must define and ensure adequate support for both students with dyslexia and teachers – providing them with appropriate knowledge and resources.

Based on the results of our study, we can conclude the following:

- Diagnosing dyslexia is a complex process, and it is insufficient to rely solely on formal diagnostic tests. It is necessary to study the student's overall condition, including interviews with parents, teachers, and other individuals/specialists supporting the student;
- Early identification of dyslexia necessitates the existence and use of assessment instruments by educators, psychologists, special educators, and other supportive specialists;
- Within the framework of our study, it has been confirmed that using the instrument developed by our team – the checklist of dyslexia assessment indicators, consisting of 49 questions, it is possible to identify students aged 6-11 (from the first to fifth grade) with dyslexia/reading difficulties;
- Ability of phonological analysis is the primary resource upon which effective reading instruction is based. It is advisable to focus on the development of this skill from an early, pre-school age;
- The main difficulties for the fifth-grade students with dyslexia are phonological analysis and a limited vocabulary and oral speech. The least pronounced difficulties are related to linguistic problems such as perception, context, and reading comprehension;
- For the first, second, third and fourth-grade students with dyslexia, phonological analysis remains the leading problem. Limited vocabulary/oral speech and orthographic difficulties also pose nearly equal challenges.

Study Limitations

One of the limitations of the study could be the accuracy of identifying/revealing dyslexia in students using the dyslexia indicator checklist. In our country, dyslexia assessment is primarily conducted by neuropsychologists. In their conclusions, one may occasionally encounter assessments such as "dyslexia is likely." The term "likely" does not provide a complete confirmation of the existence of dyslexia; however, it is entirely sufficient for a hypothesis, and it creates the conditions for the student to receive an appropriate support based on this assumption.

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