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Similarities and differences in psycho-educational assessments of adolescents with specific language impairments and specific learning disabilities: A challenging differential diagnosis

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Similarities and differences in psycho-educational assessments of adolescents with specific language impairments and specific learning disabilities: A challenging differential diagnosis

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Specific Language Impairment (SLI) and Specific Learning Disabilities (SLD) have been the subject of extensive research especially with respect to the connection between them. However, the manifestation of these disorders in adolescence has not been thoroughly investigated. The objective of the present study was to compare the intelligence scores and the reading, oral and written language skills of Greek adolescents with SLI and Greek adolescents with SLD, as assessed during their psycho-educational evaluation, in order to clear the path for diagnosis and intervention. 124 Greek adolescents diagnosed with Specific Learning Disabilities and 76 Greek adolescents diagnosed with Specific Language Impairment aged from 11 to 16 years took part in the study. All participants were assessed in reading, oral language and written language skills and took part in IQ testing. Independent samples t-test, chi-square test, odds ratios and their 95 percent confidence intervals were implemented to determine statistically significant differences. Analyses revealed differences in IQ scores and some differences in the skills assessed, thus indicating that SLI adolescents exhibited more difficulties across most of the basic academic skills, whereas SLD adolescents' difficulties confined to the affected written language skills. Specifically, the observed difference was statistically significant for the total and verbal IQ score, and WISC-III scores also disclosed a significant difference for the similarities and information

sub-tests. Regarding reading skills, SLI adolescents were 4.9 times more likely to exhibit line skipping, 5.8 times more likely to exhibit hesitations, 3.2 times more likely to exhibit repetitions of syllables/words/phrases, and 8.5 times more likely to exhibit non-acknowledgement of punctuation. Regarding reading comprehension, adolescents with SLI were more likely to have difficulty in retrieving simple information questions, making inferences, and giving titles. Adolescents with SLI were also more likely to have difficulties in story reproduction, giving synonyms/opposites, oral sentence reproduction and auditory oral word reproduction. In the area of written language skills, SLI adolescents were more likely to have poor handwriting, poor content, poor structure, and poor use of punctuation. In adolescence, Specific Language Impairment can be a different manifestation of an ongoing language disorder, which finally appears as a different type of Specific Learning Disability, but with a more generalized nature of learning difficulties. This finding should be interpreted in terms of the importance of differential diagnosis, especially during the challenging period of adolescence.

Key words: Specific learning disorder, specific language impairment, adolescence, diagnosis, educational assessment.

Introduction

Specific Language Impairment (SLI) and Specific Learning Disorder (SLD) are common developmental disorders which are considered distinct. The term "Specific Language Impairment"(SLI) is used to describe children whose language development is substantially below age-level, for no apparent cause and despite normal non-verbal intelligence.[1] These children display a significant limitation in language ability, without any evident neurological or sensory damage, such as hearing impairment.[2] According to the definition by the American Speech-Language-Hearing Association[3] as well as the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5),[4] a language disorder includes difficulties either in spoken or written language.[5] SLI prevalence ranges from 0.5% to 7%.[6,7]

According to the Individuals with Disability Education Improvement Act (IDEA), SLD is an "umbrella term" incorporating deficits affecting general academic skills, and more specifically persistent difficulties in reading, writing and arithmetic[7] not being attributed to developmental, neurological, sensory or motor disorders, intellectual disability, or lack of age-appropriate teaching.[7–12] SLD prevalence is reported to be 5–15%[13] and it is the main type of learning difficulties in which students are provided with special educational and assessment accommodations.[13] Dyslexia is the most extensively investigated learning disorder in the national and international studies regarding, features, characteristics and similarities with other disorders, diagnosis and intervention.[9]

Researchers and clinicians have gradually grown aware of the considerable overlap between language and learning disorders. Research has focused mainly in the relation between SLI and dyslexia, indicating significant overlap between dyslexia and SLI.[6,9,14–17] According to Spanoudis et al, SLI and SLD elementary school children display poor reading comprehension, spelling, orthographic processing and semantic skills, albeit with a different manifestation, i.e. as distinct disorders.[14] McArthur et al found that an average of 55% of dyslexic children in their studies met the criteria for SLI and 51% of children with SLI had a reading disability, concluding that a large percentage of children could be identified as either SLI or dyslexic.[17] Findings have also indicated that children with SLI are very likely to experience difficulties in literacy[18–22] and reading comprehension.[23–26] On the contrary, children with reading difficulties, such as dyslexic children, are likely to experience language difficulties,[17,27–29] while it seems that good language skills are used to compensate for word-level reading difficulties.[30,31] It has even been suggested that dyslexia is a form of language impairment[5,28,32–34] or that SLI is a more severe form of dyslexia.[18]

However, research focusing on whether there are underlying phonological deficits in SLI– the main cause of difficulties in dyslexia[9,35–36]– is inconclusive with most researchers arguing in favor,[9,16,34,35,37,38] but others placing less importance on these defi-

cits.[38,39] In general, most of the above studies agree, to a certain extent, that SLD and SLI share common characteristics. However, the two conditions are manifested with different symptoms.

The connection between learning and language disorders has been highly researched for pre-school and school children, especially in the case of reading disorders,[5] but when it comes to adolescence, there are still many questions concerning these two disorders. Adolescents with SLD often have persistent receptive and expressive oral language deficits as curriculum demands increase in academic areas that involve vocabulary, content specific knowledge, organization and retrieval of semantic information, basic and complex syntax, and higher-order semantic processing.[8] Children with SLI continue to experience language difficulties as adolescents[40] and are underachieving in domains such as spelling, reading comprehension, word identification, word attack and calculation.[41] Young et al even found that language-impaired children were approximately five times as likely to have academic difficulties severe enough to be classified as learning disabilities in adolescence.[41] These difficulties can take the form of deficits in reading and writing[42] and/or deficits in higher levels of oral language comprehension and expression.[42,43] Patchell and Hand acknowledged how easy it could be to misinterpret language disorders in high school students for a learning disorder, at a time when the language level of written and oral material begins to get more complex.[44] Consequently, children, adolescents and young adults facing language and learning difficulties may be identified with different diagnostic labels across their lifespan and struggle with inappropriate interventions.[5]

The acknowledgement of the above consideration is strongly reflected in DSM-5[4] where it is specified that the valid diagnostic procedure for SLI and SLD disorders does not lie only to the three basic specifiers (ex. in the domains of reading, written expression and mathematics in SLD), neither on the level of the condition's severity (mild, moderate, severe). A number of issues and parameters should be taken into account, such as obtaining both quantitative and qualitative information from a number of different sources, considering the important changes in manifestation of symptoms that occur from preschool years to adulthood.

Stated in both the DSM-5 manual as well as in a number of studies,[45,46] the enormous overall clinical profile changes that occur during adolescence and adulthood should also be considered. This is due to the fact that new areas of reduced functionality (social, professional, personal, etc.) often interfere with the "purely academic" difficulties of "grown-up" children with SLD and/or SLI.[47] Furthermore, patterns of strengths and weaknesses change with developmental time and with the influence of other important factors such as instruction.[48] In that age, with at least six year of formal schooling, many of the primary and basic difficulties of a developmental disorder may be less distinct and less sharp, some may be resolved while others may have arisen.[12,34,49,50]

A limited number of studies has compared adolescents with SLD and adolescents with SLI. Goulandris et al compared, among others, adolescents with dyslexia, and adolescents with persistent language impairment through the use of oral and written language skills testing.[34] Oral language tasks disclosed significantly lower performance for SLI adolescents than dyslexics. On tests of written language, dyslexics performed in the same level as SLI adolescents, except for reading comprehension task in which SLI showed more deficits.

In Greece official diagnosis for all developmental disorders is provided only by Diagnostic Centers supervised by the Ministry of Education (KESY) and by Child Psychiatric Units operating in major state hospitals. However, most referrals aim at the identification and diagnosis of dyslexia, due to the facilitative legislative measures regarding academic examinations. According to the Greek legislation students with dyslexia have the right to be examined orally in all academic examinations through Secondary Education and Higher Education and even in the very competitive National Exams for entrance to Higher Education. These accommodations suggest that a large number of adolescents arrive at the diagnostic centers, and many are diagnosed for the first time during adolescence, in order to benefit. Children with SLI are either misdiagnosed as dyslexics in order to benefit or are diagnosed as SLI without, though, further provision for intervention,[51]

given the fact that, generally, not only in Greece, the provision of services in adolescents with SLI seems to be less prevalent.[52]

The objective of this study was to compare the psycho-educational profiles of Greek adolescents with SLI and Greek adolescents with SLD in order to clear the path for diagnosis and intervention.

Material and method

Participants

124 Greek adolescents diagnosed with SLD and 76 Greek adolescents diagnosed with SLI aged 11 to 16 years participated in the study. All participants had been referred, assessed and diagnosed at a University Psychiatry Clinic within a period from 2009 to 2014. Both participants with SLD and SLI had received the diagnosis after completion of the diagnostic procedure conducted by a psychologist, an educational specialist, and a psychiatrist, according to the DSM-IV-TR diagnostic criteria.[53] In Greece, the identification process of SLD[51] is based on the criterion of a severe discrepancy between intellectual ability, as measured by the Greek WISC-III, and academic performance as assessed by non-standardized tools. "Thus, estimation of the discrepancy is based on clinical judgments on the part of the multidisciplinary teams, particularly with respect to the child's reading, spelling, and mathematical performance. It is not confirmed by results of standardized tests measuring academic achievement, partly due to the scarcity of such tests in Greece".[51]

The mean age of both SLD and SLI groups was 13 years and seven months (SD=1.25 and SD=1.23 retrospectively). 91 (73.4%) of the SLD group and 49 (64.5%) of the SLI group were boys. 74 (59.7%) of the SLD group and 46 (60.5) of the SLI group were referred for assessment by the parents, while the rest were referred after suggestion of the teacher or other school staff. All participants were native Greek speakers and were attending mainstream secondary education in Northern Greece. The majority of both groups (82.3% of the SLD group and 86.8% of the SLI group) attended Grades 1, 2 or 3 of the Greek Gymnasium, which is part of the compulsory education, while the rest attended Grades, 1, 2 or 3 of General Lyceum.

IQ measurement

The Greek version of WISC-III[54] verbal and performance scales were used to assess adolescents' general intelligence as well as verbal and non-verbal intelligence.

For the present study the assessment tools used have been constructed for the assessment of children and adolescents referred for educational and learning problems.[55–58] This assessment battery consists of a number of tasks evaluating basic –not curriculum based– skills in the areas of literacy and language. Each task assesses the existence or not of a difficulty in the several skills. The examiner scores one (1) if difficulties were detected or zero (0) if not.

Reading skills

(a) *Decoding skills*: The participants were given a three-paragraph simple literary story to read aloud in order to assess their reading behavior in terms of syllabic or word by word reading, substitutions (omissions, inversions, insertions etc.), line skipping, finger pointing, hesitations, repetition of syllables-words-phrases, acknowledgement of punctuation and pseudowords. The assessment of the participants' decoding skills was based on the "Miscue Analysis"[59] method of reading modified by Bonti.[58]

(b) *Comprehension skills*: The participants' performance was assessed by their ability to answer questions concerning retrieving simple information, making inferences and providing a general title and subtitles for each paragraph from a three-paragraph simple literary story.

(c) *Phonological awareness*: The assessment was based on the phonological awareness subtest of Athena Test[60] along with several other phonemic awareness tasks.[58] Participants were given several oral tasks constructed (e.g. manipulating phonemes, awareness of phoneme – grapheme relationships, discriminating between the concepts "letter," "word," "syllable," "sentence" analysis, synthesis/segmentation of letters– syllables and other phonological tasks such as adding or omitting a letter in order to produce a new word)

(d) *Oral language skills*: Participants were given a number of tasks to assess their oral language skills such as provide synonyms/opposites, story con-

struction, oral word and oral sentence repetition. The tasks were based on Detroit Test of Learning Aptitude[61] modified by Bonti.[58]

Written language skills

In order to assess written language skills participants were asked to write a composition with a given subject. The participants' handwriting, spelling, use of punctuation, structure and content were assessed based on TOWL-4[62] modified by Bonti.[58]

Results

Table 1 summarizes the results for the IQ scores using mean and standard deviation. An independent samples t-test was used to compare scores of the two groups, adolescents with SLI and adolescents with SLD. The observed difference was statistically significant for the total IQ score and for the verbal IQ score, while there was not a statistically significant difference for the practical IQ score. Adolescents with SLD had higher total and verbal IQ scores.

Furthermore, the results of these analyses demonstrated a significant difference between the two groups for the "similarities: and "information" subtests. In these categories adolescents with SLD had greater scores compared to the adolescents diagnosed with SLI (table 1).

The chi-square test, odds ratios and their 95 percent confidence intervals were used to determine statistical significant differences between adolescents with SLI and adolescents with SLD in reading, oral and written language skills.

Regarding reading skills, the two groups were assessed in terms of their decoding, reading comprehension and phonological awareness. In table 2 the results of the relation between decoding and phonological difficulties and group are presented. SLI adolescents were found approximately 4.9 times more likely to exhibit line skipping, 5.9 times more likely to exhibit hesitations, 3.2 times more likely to exhibit repetitions of syllables, words or phrases, and 8.5 times more likely to exhibit non-acknowledgement of punctuation. It was also noted that there were not any statistical differences between the two groups in finger pointing, syllabic reading and decoding pseudowords. Finally, there was no statistically significant relation between difficulties in phonological awareness and group. Almost half adolescents of both groups displayed difficulties with the numbers being higher for adolescents with SLI (table 2).

Similarly, statistical analyses revealed a relation between diagnosis and reading comprehension difficulties. Adolescents with SLI were more likely to have difficulties retrieving simple information questions, making inferences, and giving titles (table 3).

Regarding the relation between the diagnosis and oral language difficulties, statistical differences also emerged (table 4). More specifically, adolescents with SLI were more likely to have difficulties in story reproduction, synonyms/opposites, oral sentence reproduction, and auditory oral word reproduction. It was observed that a very high percentage of SLI adolescents, almost 9/10, encountered difficulties in all tasks assessing oral language skills, except audi-

Table 1. Comparisons between SLI and SLD adolescents in WISC-III scores.

WISC-III scores	SLD		SLI		p
	Mean	SD	Mean	SD	
Total IQ	100.85	11.41	87.71	11.17	0.00
Verbal IQ	103.94	11.40	84.88	11.09	0.00
Practical IQ	96.52	11.81	93.60	14.17	0.12
Information	9.98	2.71	7.39	2.71	0.00
Similarities	11.52	2.62	8.35	2.37	0.00
Vocabulary	7.67	2.73	8.00	2.96	0.43
Filling Images	9.27	2.88	9.01	2.94	0.55
Cubes	10.02	2.77	9.20	2.83	0.05
Object Assembly	10.08	2.78	9.50	2.89	0.16

Table 2. Chi-square test and odds ratio for decoding difficulties and phonological difficulties with respect to group.

Task		f(SLD)	f(SLI)	p	OR* (95% CI**)
Substitutions	No	56.5%	42.1%	0.05	1.78 (1.00–3.18)
	Yes	43.5%	57.9%		
Syllabic reading	No	80.6%	71.1%	0.12	1.70 (0.88–3.31)
	Yes	19.4%	28.9%		
Line skipping	No	92.7%	72.4%	0.00	4.88 (2.10–11.35)
	Yes	7.3%	27.6%		
Finger pointing	No	79.8%	69.7%	0.10	1.72 (0.89–3.32)
	Yes	20.2%	30.3%		
Hesitations	No	29%	6.6%	0.00	5.81 (2.17–15.58)
	Yes	71%	93.4%		
Repetitions of syllables, words & phrases	No	68.5%	40.8%	0.00	3.16 (1.75–5.73)
	Yes	31.5%	59.2%		
Non acknowledgement of punctuation	No	67.7%	19.7%	0.00	8.54 (4.33–16.84)
	Yes	32.3%	80.3%		
Difficulties in decoding pseudowords	No	57.3%	47.4%	0.17	1.49 (0.84–2.64)
	Yes	42.7%	52.6%		
Difficulties in phonological awareness	No	49.2%	35.5%	0.07	1.76 (0.98–3.16)
	Yes	50.8%	64.5%		

*OR=Odds Ratio, **CI=Confidence Interval

Table 3. Chi-square test and odds ratio for reading comprehension difficulties with respect to group.

Task		f(SLD)	f(SLI)	p	OR* (95% CI**)
Difficulties in retrieving simple information questions	No	91.9%	47.4%	0.00	12.67 (5.76–27.85)
	Yes	8.1%	52.6%		
Differences in inferences	No	89.5%	17.9%	0.00	41.38 (18.07–94.76)
	Yes	10.5%	82.9%		
Difficulties in giving titles	No	55.6%	5.3%	0.00	22.58 (7.77–65.67)
	Yes	44.4%	94.7%		

*OR=Odds Ratio, **CI=Confidence Interval

tory word reproduction where there was a difference between the two groups but still only 38.2% of SLI exhibited difficulties (table 4).

In the area of written language skills, statistical analyses disclosed an association between the diagnosis and some of the skills assessed. In particular, it was more likely for SLI adolescents to have poor handwriting, poor content, poor structure and poor use of punctuation in their writing. It was notable that almost all SLI adolescents who participated in the study exhibited the above difficulties, while difficulties in spelling appeared to be a common problem both for SLD and SLI adolescents (table 5).

Discussion

The findings of the present study stress the complex relationship between language disorders (SLI in particular) –undiagnosed or misdiagnosed at an early stage in most cases– and later learning difficulties, as expressed during adolescence. The exceptional-

Table 4. Chi-square test and odds ratio for oral language difficulties with respect to group.

Task		f(SLD)	f(SLI)	p	OR* (95% CI**)
Difficulties in story reproduction	No	96%	10.5%	0.00	202.3 (63.47–643.0)
	Yes	4%	89.5%		
Difficulties in synonyms/opposites	No	79%	9.2%	0.00	37.15 (15.26–90.44)
	Yes	21%	90.8%		
Difficulties in oral sentence reproduction	No	98.4%	3.9%	0.00	1484.33 (242.3–9093)
	Yes	1.6%	96.1%		
Difficulties in auditory oral word reproduction	No	100%	61.8%	0.00	–***
	Yes	0%	38.2%		

*OR=Odds Ratio, **CI=Confidence Interval, ***Cannot be calculated because the relative frequency for SLD adolescents in category No is 0

Table 5. Chi-square test and odds ratio for written language difficulties with respect to group.

Task		f(SLD)	f(SLI)	p	OR* (95% CI**)
Poor handwriting	No	11.3%	0%	0.00	–***
	Yes	88.7%	100%		
Difficulties in spelling	No	80.6%	71.1%	0.12	1.70 (0.87–3.31)
	Yes	19.4%	28.9%		
Poor content	No	45.2%	1.3%	0.00	61.77 (8.32–458.41)
	Yes	54.8%	98.7%		
Poor Structure	No	8.9%	1.3%	0.03	7.30 (5.92–57.73)
	Yes	91.1%	98.7%		
Poor use of punctuation	No	25.8%	13.2%	0.03	2.30 (1.06–4.99)
	Yes	74.2%	86.8%		

*OR=Odds Ratio, **CI=Confidence Interval, ***Cannot be calculated because the relative frequency for SLD adolescents in category No is 0

ity of the study is that the participants were adolescents, compared to the majority of the relevant literature where the focus is on younger children mostly in their first years of typical education.

The results of the present study disclosed that the "centrality of the language factor" in adolescence, also stressed by several researchers,[5,44,63] may strike out in terms of its enormous interference with almost every academic area. This also became apparent in the present findings, as SLI adolescents presented an overall lower –but within normal levels– IQ score (total and verbal) compared to the SLD group, which was a prospective finding, as it came to an agreement with the actual diagnostic criteria of the SLI population according to which SLI children present a below-age level of language development along with a normal non-verbal intelligence score on the WISC-III.[1,64] However, a challenging thought rising from this finding was that the "ostensibly low" total IQ score witnessed in most of the SLI adolescents could be a possible "plasmatic" reflection of the SLI child's ongoing – throughout the school years- struggle with the various academic tasks, due to their "problematic" language skills, rather than vice versa.

With respect to the comparison of the two groups in the reading skills assessed, decoding and phonological awareness skills, the findings revealed that both SLD and SLI adolescents seemed to have overcome their difficulties at a satisfactory level, since none of the two adolescent groups presented significant defects in those areas. This was probably due to

the different manifestation SLD and SLI seem to take through the years.[14,16,17,27,36,37,65]

On the other hand, the particular reading skills in which the SLI group performed lower probably reflected their lack of familiarity with the morphological, grammatical and syntactical structures of written language and possibly poor vocabulary. Once again, this finding revealed the enormous effect of the underpinning of oral language development required for developing adequate literacy skills, "especially by the time of high school, when the language level of written and read material begins to equal and then exceed the spoken system in complexity."[44]

Reviewing the above findings concerning the overall reading skills of the two groups, the following are to be considered: The adequate performance of both groups in phonological skills assessment and in some of the decoding skills assessment also raise questions about the "validity" of the diagnostic terms used both in the research literature as well as in non-school clinical settings to describe types or variations of SLD and SLI diagnoses. For example, the terms "SLD" and "Dyslexia," by definition, presuppose reading disorder, impaired decoding – word attack and phonological skills, as well as poor reading fluency8. Based on our findings, though, it seemed that those characteristics, broadly used to identifying SLD and SLI populations during the early school years, are not 'valid' anymore when it comes to adolescence.

In addition, the fact that the SLD group did not exhibit difficulties in the oral language tasks only partially agrees with the argument that a spoken and/or written language disorder consists a learning disorder and vice versa,[5] since it seems that this might be the case only during the early school years but not at the age of adolescence. The present findings are in accordance with research arguing that SLD adolescents are more likely to have overcome basic skills deficits at that age, albeit they exhibit higher level deficits.[12,50] SLI group performed at a significantly lower level in almost all skills, thus revealing the severity and continuum of their difficulties in the late school years, which is also consistent with other studies.[14,40,41]

The only area in which both SLD and SLI students seemed to encounter similar difficulties is that of written language skills, especially when it came to handwriting, content, structure and use of punctuation. This finding probably reveals that during adolescence, written language skills are still seriously affecting both the SLD and the SLI academic performance. It should also be mentioned that written language skills are the only area in which the SLD group exhibits difficulties at a higher percentage. Of course, even though many of the SLD presented difficulties with the overall content and expressive skills of their written text, the majority of them presented good ideas and sufficient vocabulary, compared to the SLI group who, as already mentioned above, still struggle with most of the written language tasks. This is in agreement with researchers stating that adolescents seem to "outgrow: some of their language and/or learning difficulties through the years.[49,50]

Therefore, our findings are only partially in line with the researchers who have concluded that a large percentage of the SLD and SLI population could be identified as either one or the other or that their difficulties could be a different manifestation of the same developmental language disorder.[17,28,29] The present study offers support to the idea that instead of using the dichotomy of SLI and SLD in diagnosis,– especially in Greece where the former do not receive the appropriate services and assessment and facilitations are not provided – professionals should acknowledge the significant overlap of language impairment and learning difficulties, not only in "language and/or literacy related" academic areas.

Conclusion and future directions

By this study the authors hope they will stimulate researchers on investigating further relationships of language and learning disorders across the life span and efforts on the part of clinicians to support adolescents in receiving the right diagnosis and a meaningful intervention which addresses their needs. Finally, since we have a major scientific interest, as well as a number of studied around the learning profiles and other life areas of adults with SLD, future research could be expanded in the investigation of the language aspects and difficulties this population may encounter.

Ομοιότητες και διαφορές στην ψυχο-εκπαιδευτική αξιολόγηση των εφήβων με ειδικές γλωσσικές διαταραχές και ειδικές μαθησιακές δυσκολίες: Μια απαιτητική διαφοροδιάγνωση

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Η Ειδική Γλωσσική Διαταραχή (SLI) και οι Ειδικές Μαθησιακές Δυσκολίες (SLD) αποτέλεσαν αντικείμενο εκτεταμένης έρευνας, ιδίως όσον αφορά τη μεταξύ τους σχέση. Η εκδήλωση αυτών των διαταραχών στην εφηβεία, ωστόσο, δεν έχει διερευνηθεί διεξοδικά. Στόχος της παρούσας μελέτης ήταν η σύγκριση των δεικτών νοημοσύνης και των γλωσσικών δεξιοτήτων ανάγνωσης, καθώς και προφορικού και γραπτού λόγου των Ελλήνων εφήβων με Ειδική Γλωσσική Διαταραχή και Ελλήνων εφήβων με Ειδικές Μαθησιακές Δυσκολίες, όπως αξιολογήθηκαν κατά τη διάρκεια της ψυχο-εκπαιδευτικής αξιολόγησής τους, προκειμένου να ανοίξει το δρόμο για διάγνωση και θεραπευτική παρέμβαση. 124 Έλληνες έφηβοι διαγνωσμένοι με Ειδικές Μαθησιακές Δυσκολίες και 76 Έλληνες έφηβοι με διάγνωση Ειδικής Γλωσσικής Διαταραχής ηλικίας 11 έως 16 ετών συμμετείχαν στη μελέτη. Όλοι οι συμμετέχοντες αξιολογήθηκαν στην ανάγνωση, τις προφορικές και γραπτές γλωσσικές δεξιότητες και συμμετείχαν σε δοκιμασία νοημοσύνης. Για τον προσδιορισμό στατιστικών σημαντικών διαφορών εφαρμόστηκαν οι δοκιμασίες t-test για ανεξάρτητα δείγματα, x^2-test, λόγος σχετικών πιθανοτήτων και διαστήματα εμπιστοσύνης 95%. Οι αναλύσεις ανέδειξαν διαφορές στις βαθμολογίες δείκτη νοημοσύνης και κάποιες διαφορές στις δεξιότητες που αξιολογήθηκαν, υποδεικνύοντας έτσι, ότι οι έφηβοι με Ειδική Γλωσσική Διαταραχή εμφάνιζαν περισσότερες δυσκολίες στις περισσότερες από τις βασικές ακαδημαϊκές δεξιότητες, ενώ οι δυσκολίες των εφήβων με Ειδικές Μαθησιακές Δυσκολίες περιορίζονταν στις διαταραγμένες δεξιότητες γραπτού λόγου. Συγκεκριμένα, η παρατηρούμενη διαφορά ήταν στατιστικά σημαντική για τη συνολική και λεκτική βαθμολογία του δείκτη νοημοσύνης, καθώς και τις επιμέρους υπο-δοκιμασίες (WISC-III) ομοιοτήτων και πληροφοριών. Ως προς τις δεξιότητες ανάγνωσης, οι έφηβοι με SLI είχαν 4,9 φορές περισσότερες πιθανότητες να παρουσιάσουν παράλειψη γραμμής, 5,8 φορές δισταγμό, 3,2 φορές επαναλήψεις συλλαβών/λέξεων/φράσεων και 8,5 φορές μη-αναγνώριση της στίξης. Όσον αφορά την κατανόηση της ανάγνωσης, είχαν περισσότερες πιθανότητες να δυσκολευτούν να απαντήσουν σε απλές ερωτήσεις ανάκτησης πληροφοριών, να εξάγουν συμπεράσματα και να δώσουν τίτλους. Οι έφηβοι με SLI είχαν επίσης περισσότερες πιθανότητες να αντιμετωπίσουν δυσκολίες σε αναπαραγωγή ιστοριών, συνώνυμα/αντίθετα, αναπαραγωγή

προφορικής πρότασης και ακουστική αναπαραγωγή προφορικής λέξης. Στις γραπτές γλωσσικές δεξιότητες, είχαν περισσότερες πιθανότητες να έχουν κακό γραφικό χαρακτήρα, και ένδεια σε περιεχόμενο, δομή και χρήση σημείων στίξης. Κατά την εφηβεία, η Ειδική Γλωσσική Διαταραχή μπορεί να είναι μια διαφορετική εκδήλωση μίας διαρκούς γλωσσικής διαταραχής, η οποία τελικά εμφανίζεται ως ένας διαφορετικός τύπος Ειδικής Μαθησιακής Δυσκολίας, αλλά με μια πιο γενικευμένη φύση των μαθησιακών δυσκολιών. Αυτό το εύρημα θα πρέπει να ερμηνεύεται με βάση τη διαφοροδιαγνωστική του αξία, ειδικά κατά τη διάρκεια της απαιτητικής περιόδου της εφηβείας.

Λέξεις ευρετηρίου: Ειδικές μαθησιακές δυσκολίες, ειδική γλωσσική διαταραχή, εφηβεία, διάγνωση, εκπαιδευτική αξιολόγηση.

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