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EC NEUROLOGY
Case Study

Specific Learning Disorder with Impairment in Written Expression - Comorbidity with Emotional and Behavioral Disorders

Christos Kalatzis[1] and Katerina Sakellariou[2]*

[1]Special Education Teacher, Department of Child Psychiatry, Community Mental Health Center Byron-Kaisariani, Department of Medicine, 1st Psychiatric Clinic, Eginitio Hospital, National and Kapodistrian University of Athens, Greece

[2]Laboratory Teaching Faculty in Psychology, Psychologist, Department of Child Psychiatry, Community Mental Health Center Byron-Kaisariani, Department of Medicine, 1st Psychiatric Clinic, Eginitio Hospital, National and Kapodistrian University of Athens, Greece

***Corresponding Author:** Katerina Sakellariou, Laboratory Teaching Faculty in Psychology, Psychologist, Department of Child Psychiatry, Community Mental Health Center Byron-Kaisariani, Department of Medicine, 1st Psychiatric Clinic, Eginitio Hospital, National and Kapodistrian University of Athens, Greece.

Received: July 16, 2026; **Published:** July 27, 2026

Abstract

This article discusses a case that illustrates the comorbidity between Specific Learning Disorders (SLDs)-specifically "Specific Learning Disorder with impairment in Written Expression"- [14] and Emotional and Behavioral Disorders. International research has shown that Specific Learning Disorders (SLDs) are secondarily associated with significant consequences for both the emotions and behavior of students, as they affect their daily school life and academic performance, as well as their self-esteem [3,24,25].

The results of studies showing that students with learning disabilities very often exhibit emotional disorders ranging from simple anxiety to major depressive disorder and suicidal ideation vary [1,21,22]. Furthermore, other studies associate the presence of SLD with the secondary development of behaviors that may be characterized, on the one hand, by disruptive and restless behavior and, on the other hand, by disengagement from the learning process and dropping out of school [15,25].

This article will discuss the case of a boy in the fourth grade of elementary school who was diagnosed with a Specific Learning Disorder with impairment in Written Expression, accompanied by emotional and behavioral disorders.

A coordinated effort will therefore be made to present the therapeutic intervention, which included: a) educational support, through a personalized intervention program whose primary goals are, on the one hand, to address the deficits identified in written expression and, on the other hand, to boost the student's self-esteem and address Emotional and Behavioral Disorders, and b) brief counseling for parents.

Keywords: *Specific Learning Disorders (SLD); Specific Disorder of Written Expression; Spelling Errors; Vocabulary; Memorization; Emotional Disorders; Behavioral Disorders; Comorbidity*

Introduction

Specific Learning Disorders (SLDs) refer to innate, neurodevelopmental disorders that significantly affect a relatively limited range of academic outcomes, resulting in corresponding consequences for school performance. In many cases, they may stem from developmental or growth-related dysfunctions in critical areas of cognitive processes, such as deficits in attention and concentration, deficits in the memorization process, disorders in speech or motor coordination, difficulties in performing higher-order cognitive functions (e.g. abstract thinking or identifying cause-and-effect relationships), or structural deficits in the organization of cognitive processes. They often refer to one or more deficits in basic learning skills, which require specialized pedagogical techniques and instruction to address and are not the result of sensory, cognitive, psycho-emotional deficits, or inadequate education [14].

Specific Learning Disorder with impairment in Written Expression is a learning disability characterized by a severe deficit in the development of written expression and spelling accuracy. It significantly affects both the ability of verbal spelling, grammar and punctuation accuracy and clarity of written expression [14]. Specifically, spelling accuracy is below what is expected for the child's age, general intelligence, and grade level. The child is unable to apply grammatical and syntactic rules, reverses, omits, or substitutes letters and syllables, fails to separate words, and is unable to use punctuation marks (syllabification). At the same time, they struggle to produce spontaneous written text, and their verbal and written expression is limited [4].

Furthermore, in the Greek language, it appears that deficits in morphology play a significant role in the acquisition of orthography. Greek is a morphologically rich language with a complex inflectional system: articles, pronouns, and adjectives, while some numerals inflect for gender, number, and case. Nouns can be masculine, feminine, or neuter and are inflected for number and case. Verbs are morphologically distinguished by the following categories: "person", "number", "tense", "voice", "mood" and "aspect". Students may encounter spelling difficulties with endings that exhibit extensive homophony but different spellings [6,17,20]. The above difficulties should not be attributable to deficits in visual, auditory, neurological function, be acquired as a result of other disorders (neurological, psychiatric, sensory, etc.), or be the result of inadequate instruction [1,26].

SLDs have been associated with a wide range of disorders. It is argued that children with SLDs experience more anxiety than typically developing children, which manifests emotionally (fear of failure, low self-esteem, physical complaints, lower tolerance for frustration, depression, suicidal ideation) [19].

In addition, children with SLD often develop secondary behavioral disorders. Academic failure plays a significant role in the emergence of behavioral disorders, as it undermines these children's self-esteem and often leads them to be marginalized in the classroom and in the school system in general [2]. The risk for these children is that their identity will be shaped by feelings of inadequacy and inferiority on a personal and social level, resulting in the development of reactive and potentially delinquent behaviors as a means of expressing their dissatisfaction with setbacks, failures at school, and the feelings of rejection and isolation they experience from peers (classmates) and adults (parents and teachers) [16].

Presentation of the Case Study

Information from the social background

This is D., a 9.8 years old boy in the fourth grade who attends a public school in the area. The request for an evaluation by the Medical-Educational Service of the Community Mental Health Center of Byron-Kaisariani, which his mother submitted online (as is now the procedure for the Service), concerned an investigation into his learning difficulties. More specifically, in relation to the reported issue, the mother (at the teacher's urging) focused on difficulties related to learning history as well as written expression-namely, spelling errors and a particularly limited ability to develop his thoughts.

During our first meeting with the parents, we gathered initial information about D. The request concerned learning difficulties related to memorizing the history curriculum, the poor quality of his written work, as well as behaviors such as avoidance or non-participation in classroom activities. D.'s difficulties were described primarily by his mother, while his father provided supplementary yet crucial input. Although the mother has almost entirely taken on the responsibility of his education, there is clear unanimity and harmony between the two parents, as the father was aware of every aspect of the difficulties his child faced, down to the smallest detail. The referral to the Service was therefore made with the consent of both parents and the teacher, as they shared the same concerns regarding the child's academic progress and behavior.

D.'s family consists of four members: his parents and his two brothers. D. is the younger of the two boys, while his older brother, S., is a teenager and is in the second year of middle school. According to their parents, the brothers share mutual feelings of love, respect, and appreciation, while maintaining the necessary distance since they have separate bedrooms. The family lives on the first floor of a privately owned house, while grandparents live on the ground floor. The father is 47 years old, has a college education (businessman), and during the session appeared to have difficulty successfully expressing his thoughts (word-finding difficulty). The mother is 45 years old, also holds a university degree, and works as a private-sector employee at a multinational company. This is a family belonging to the upper socioeconomic status that places particular emphasis on their children's education, as they have high expectations regarding their children's educational attainment. Noteworthy is the support provided by the grandparents for the children's extracurricular activities, as they assist greatly with transportation.

D. began his school life in preschool, where he adjusted smoothly even though he seemed frightened at first. During his time in preschool, the teachers described him as a polite and sociable boy with a gentle disposition who participated in all school activities. Upon his transition to elementary school, his first-grade teacher did not observe any difficulties in either writing or reading skills. The first difficulties began to become apparent when D. entered third grade, where he was required to work with a strict teacher whom he feared (she was domineering and critical), because he had to actively engage in studying, memorization, and retelling, under her watchful eye. For the first time, the parents realized that their child was experiencing anxiety (stomachaches, frequent bouts of illness, and absences), while they also noted their own difficulty in working with this particular teacher.

D., as already mentioned, is the second child in the family. Both the pregnancy and the delivery proceeded smoothly. Furthermore, the mother did not report any delays at any stage of the child's psychomotor development. Once the information gathering was complete, the diagnostic process began, starting with the Psychopedagogical-learning assessment.

Initial assessment of the child

D. arrived accompanied by his mother. He is a well-mannered, composed, very sweet, and reserved boy, very well-groomed and clean, who parted from his mother without any difficulty. He cooperated willingly throughout the assessment, showing no signs of inattention or difficulty concentrating. He was an intelligent child with good eye contact, communicative, and possessing satisfactory verbal skills. His spoken language is characterized by a circumlocutory vocabulary that lacks precision, and semantic paraphasia were observed. Regarding his narrative ability, significant difficulty in finding the appropriate word and poor syntactic structures were observed. The psycho-educational evaluation did not reveal any difficulties in the reading decoding mechanism; however, deficits were observed in text comprehension, including misinterpretations of meaning (he understands better after a third party reads the text aloud) and incomplete reconstruction of the text. He uses for the most part paratactic syntax throughout the narrative [5]. In the written expression, the following were identified: spelling errors, poor syntactic structures and poverty of thought content [6]. In mathematics, mild difficulties were observed in understanding and solving math problems, especially when they involved comparative concepts. The recurrence and consistency of the deficits as a whole revealed mild deficit in verbal expression (vocabulary, semantics, narrative ability) and in written expression (spelling, content). At the end of the assessment, D. was asked to draw the figure of a person and comment on it. It thus appeared that he had deficient representational ability, low self-esteem, as he himself indicated in his comments.

This was followed by a psychological evaluation using the Wechsler Intelligence Scale for Children (WISC-V) to assess cognitive abilities. D. cooperated willingly during the test, and it was determined that he is a child whose Full Scale IQ falls within the normal range. Furthermore, the test analysis reveals that the Verbal subtests yielded lower scores compared to the Performance subtests, which confirms our initial hypothesis of mild deficits in oral language. Specifically, in the "Arithmetic" subtest, he demonstrated an inability to consistently understand the instructions, while in the "Vocabulary" subtest, he also scored low because his answers lacked accuracy, and his definitions were descriptive or given by way of example. D. performed better on the practical subtests. The results of the psychological assessment confirm the cognitive deficits described above. D.'s urgent need for clarification regarding the instructions in the various subtests of the test indicates a possible difficulty in comprehension [23].

D. attended the three appointments deemed necessary to complete the diagnostic process, accompanied alternately by both parents. At first he was hesitant, but as time went on he became talkative and communicative. He cooperated willingly during our subsequent sessions, made a greater effort to understand the instructions, and seemed to be trying to respond and engage in what he was doing. He was interested in answering correctly and wanted to correct the mistakes he realized he was making. Throughout the assessments, no lack of attention or inability to concentrate was observed; however, mild anxiety was noted. D. was completely focused on the task at hand and frequently sought the examiner's assistance.

All of the above observations were linked to family history (a possible undiagnosed specific language disorder in the father) [18]. Upon completion of the diagnostic process, the results were communicated to the parents, along with the treatment recommendation. In conclusion, this is a bright child who wants to perform well, but exhibits mild deficits in the area of expression (vocabulary, semantics), while a Specific Disorder was identified in Written Expression (written formulation and text reconstruction, memorization), in emotion (anxiety), and in behavior (avoidance). The therapeutic intervention recommended to the parents included systematic individual educational support for D. with a Special Education Teacher (twice a week) and brief parental counseling (twice a month) to help them provide him with emotional support.

Special educational intervention

The purpose of the special educational intervention was to address the deficits identified in D., while the parental counseling aimed to support them in better understanding the need to change their behavior toward the child by reinforcing the practice of encouragement through positive reinforcement and rewards [4].

The specific objectives of the special educational intervention were: i) to address the mild difficulties D. was experiencing with written expression so that he could meet the demands of his classroom, ii) to expand his vocabulary and correct his spelling in order to improve the quality of his writing (vocabulary, written expression, syntactic structures), and iii) encouraging D. to feel confident in the knowledge he was acquiring, with the ultimate goal of his active participation in the classroom. A prerequisite for achieving the above was the remediation of mild language deficits reflected in verbal expression [1,17,20].

The additional goals set were to address the deficits. Specifically: i) verbal expression skills (vocabulary, semantics) and ii) the correction of deficits in written expression (spelling, syntactic structures, and content). The brief therapeutic pedagogical intervention was based on the principles of special education, namely: i) the establishment of a therapeutic relationship between the child and the educator, in which availability, consistency, trust, child-educator collaboration, and the preservation of each individual's autonomy, ii) the child's active engagement, iii) the educator's ability to adapt the content of the sessions to the child's existing skills and current needs or interests without deviating from the goals of the intervention, and iv) the continuous and systematic evaluation of the intervention's results, as well as the utilization of the data derived from it and its integration into the objectives of subsequent sessions [11]. The material used was selected based on the objectives of each session as well as on the initial purpose of the intervention.

For this reason, educational materials were used-some pre-made and others improvised. Based on their content, the sessions can be divided into two phases. In the first phase, the content was aimed at addressing deficits in oral expression, while in the second phase, it focused on addressing deficits in written expression (syntactic structures, spelling, and content). Each activity or assessment, regardless of its specific objective, provided opportunities to develop dialogue and practice proper verbal expression in terms of syntactic structures, semantics, pragmatics, and vocabulary enrichment in both verbal and written expression [10].

Particular emphasis was placed on ensuring continuity in the content of the sessions. In other words, the content of each session was not isolated or unrelated to that of the previous or subsequent session. Ensuring continuity of content not only provides the child with a sense of stability but also supports the continuity of thought and cognitive processes, guiding the child to progress from the simplest to the most complex, to use acquired knowledge to gain new knowledge and to broaden the ways in which this knowledge is acquired that is, learning strategies by applying them to other academic subjects as well (e.g. strategies for studying history lesson). The remediation of mild difficulties in oral expression (vocabulary, expression) and written expression (spelling, syntactic structures, and content) was aimed at compensating for the functional deficits that constituted a barrier to D.'s active participation in classroom activities weighed on him emotionally, damaging his self-esteem and self-image. This caused him additional anxiety [11]. The consistent scheduling of the sessions and the availability of the Special Education Teacher helped create a framework that fostered the therapeutic relationship, laying the groundwork for alleviating the child's anxiety, as well as their willingness to participate enthusiastically in activities aimed at addressing difficulties in written expression (spelling, special education exercises) [13].

Parenting counseling

In recent years, ecosystem-based interventions have taken on a significant role in international research and literature, as the critical role of the environment in child development and growth has been recognized, as well as the interaction between these environments (family, school, and social life) [8,12]. The family and the role of parents, who serve as the child's primary and stable point of reference, play a central role. One of the most common and effective interventions accompanying a child's individual therapy is parent counseling. This primarily aims to support the parents' psychological well-being and development, helping them draw on their existing resources and abilities to develop new methods that will make daily life at home easier for them, as well as in managing their relationships with each other and with their children [4].

In this particular case, brief parental counseling was provided with the aim of supporting the parents, so that they could better understand the need to change their behavior toward their child by reinforcing a strategy of encouragement through positive reinforcement and rewards. The frequency of the sessions was set at one every three weeks and was scheduled to coincide with the Special Educational Intervention that D. was receiving. A total of 10 sessions were held. The topics discussed during these sessions included: the nature of the deficits D. was facing, the management of expressed emotions, as well as the behaviors that were developing, and issues that arose in daily life in the context of cooperation among family members or with the special education teacher during the implementation of D.'s Individualized Intervention Program, or with the school. The parents cooperated smoothly and acknowledged the assistance they received, as well as the important role that this intervention played in fostering good cooperation with the school.

The child's final evaluation

Upon completion of the special educational intervention which spanned an entire academic year it was deemed necessary to conduct a new psychoeducational evaluation of the child. The purpose of this reassessment was to evaluate D.'s cognitive, language, and academic skills. During the reassessment, he cooperated willingly, was in a good mood, communicative, and appeared less anxious. He appears to be fully engaged in the entire process because he is interested in answering correctly; he demonstrated good attention and concentration, as well as appropriate eye contact. During the psychoeducational assessment, satisfactory oral expression and an improvement in expressive skills were observed. Furthermore, D.'s change of attitude toward the History class which he used to detest before the

therapeutic intervention is particularly noteworthy, as he now counts it among his favorite subjects. He seems much more confident in himself and his abilities. The assessment of his academic abilities revealed an improvement in his vocabulary (fewer unknown words; definitions remain circumlocutory but better understanding of the meaning of words), while his narrative skills improved significantly (he mentions the key elements of the text, omits less information, and his narrative structure is more correct). In his written expression, improved sentence structure and the use of focused vocabulary were observed, while limited development in terms of content and mild spelling errors persist.

In conclusion, it appears that the initial language deficits in verbal expression (expression, narrative ability, and vocabulary) have improved significantly, having a positive impact on D.'s emotional state (less anxiety, reduction in psychosomatic symptoms) and D.'s self-esteem. However, the corresponding deficits in written expression (written text content, spelling) require further intervention, primarily the reinforcement of grammatical and spelling rules, which will be recommended. An important role in D.'s improvement was played by the excellent cooperation with his parents, the child's high level of cognitive abilities, and the excellent collaboration with his school teacher. This fact highlights, once again, the inextricable link between the cooperation of all parties involved and the desired outcome [12].

Evaluation of special education interventions

The primary goal of D.'s special educational intervention was to address the mild difficulties the child exhibited, primarily in written expression (syntactic structures, vocabulary, and spelling), with the ultimate goal of fostering his active participation in the classroom setting, as well as improving his emotional and behavioral aspects (anxiety and self-esteem, avoidance behaviors). Specific objectives of the intervention were to address deficits in: i) verbal expression (vocabulary, narrative ability) and ii) written expression (spelling, syntactic structures, and content).

As revealed by D.'s psycho-educational re-evaluation, the primary goal of the intervention was achieved, since improvements were observed in his verbal expression, narrative skills, and vocabulary, resulting in the student's increased participation in class, according to his teacher's account. Furthermore, the physical manifestations of his anxiety (stomachaches, feeling unwell, and absences) decreased, according to his parents, as he changed the way he expressed his emotions, leading to an improvement in his self-esteem.

From all of the above, it is clear that the specialized educational intervention implemented was a complete success. However, recognizing that overcoming difficulties in written expression (content and spelling) and building self-esteem require a longer period of intervention, it was recommended that the intervention continue during the next academic year at the same frequency.

Conclusion

D. is one of many children with Neurodevelopmental Disorders/Specific Learning Disorders (SLDs) who seek help from a medical-educational service. In this specific case, there is comorbidity between learning disorders (SLD with impairment in written expression) and emotional (anxiety and its somatization) and behavioral (frequent absences) disorders [7,9]. The literature confirms the frequency of such comorbid conditions that a service is called upon to address, so that intervention with the child and parents can be effective.

The Special Educational Intervention implemented for D. was based on the principles of Therapeutic Pedagogy (Special Education), according to which the educational therapist intervenes to unblock the developmental process and restore balance by mobilizing the child's inherent strengths [11]. D., as has already been described in detail, was a child with high cognitive abilities, but his limitations in verbal expression, combined with his tendency to become anxious, led him to somatise his anxiety, manifesting behaviors that negatively affected his school attendance (non-participation in class, feigned illness, and frequent absences). D.'s parents, belonging to a segment of the population with a high level of education, were aware of their child's weaknesses in all areas (academic, emotional, and behavioral), they refused to acknowledge the negative impact of their critical attitude toward him.

When the educator, through a therapeutic relationship, took on the role of a "healthy" environment that offers stimuli and opportunities without criticism, D. was able to take the initiative, improve his expressive abilities, examine his emotions, address his language deficits to build his self-esteem, recognize and manage his anxiety, and, as a result, achieve better participation and performance in school.

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