



School Interventions for Students with ADHD and Learning Difficulties: A Mini Review



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Abstract

Considering the prevalence of students with ADHD and learning difficulties, it is necessary to think about interventions in the school environment that can qualify teaching work and provide effective learning for these students. In this sense, this mini review seeks to highlight some important evidence in the literature and indicate the need for further studies on the subject with which it is possible to generalize some results and, with that, establish adequate guidelines for teachers.

Keywords: ADHD students; Learning difficulties; School interventions

Mini Review

Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder that affects around 3% to 6% of the world's child population [1]. Its main symptoms include inattention and hyperactivity, which may or may not be combined. These symptoms can lead to impairments in social life, as well as compromising students' academic performance in several areas of school learning [2,3].

Some authors have shown that the high rates of comorbidities between ADHD and Learning Disorder (LD) can explain poor school performance [4]. This can also be understood by the impairment of important cognitive skills for learning, such as selective attention, working memory and processing speed [5]. In addition, the main symptoms of ADHD can lead students to less engagement in school tasks and greater difficulty in automating knowledge and procedures, thus causing learning difficulties [5].

In this sense, and in accordance with the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), it is important to highlight that not all students with ADHD will have LD. However, as a significant number of school-aged children and adolescents may present impairments in their school performance – whether due to the comorbidity of ADHD with LD or due to learning difficulties secondary to ADHD – it is necessary to prepare school assessments that identify the skills that are

lagging among students with ADHD [5], as well as plan targeted and appropriate interventions for the needs of these students.

It is known that research on effective interventions for students with ADHD who also have learning difficulties is still scarce. However, evidence from samples of ADHD students alone offers important guidelines to plan appropriate interventions. In addition to pharmacological treatment, which eases the symptoms of ADHD and, consequently, can provide students with better academic results, there are the school interventions as an alternative to act on the academic and cognitive skills of these students, thus providing more effective learning [5,6].

Even though skills deficits vary among ADHD students, evidence indicates some general strategies to guide teacher work in the classroom. Some of these strategies include direct and explicit teaching on specific skills, making adaptations in the classroom (e.g., minimizing distracting elements, allowing the student to sit next to the teacher or to a colleague who can help him/her, and starting the class with tasks that require more attention) or diversify the way activities are carried out, such as including oral assessment, tasks done in pairs or with technology support [7].

School intervention studies in ADHD students indicated more effective results when considering combined interventions

with a metacognitive focus (including training in self-regulation strategies, self-regulation of attention, self-monitoring of behavior and working memory) and specific writing and math skills [8,9]. These studies also indicated transfer of learning effects, specifically regarding the apparent decrease in classroom behavioral symptoms of ADHD and math performance, which were reported by participating students' teachers [9].

Other studies have already indicated the possibility of intervention in organizational skills, mediated by the teacher in the classroom and at home by parents, which contributed to better performance in school grades, as well as commitment to tasks [10]. Besides that, Rabiner et al. [11] indicated that computer-based teaching provided better performances in reading fluency, mathematics and improved report card grades and teacher assessments of academic achievement. As an alternative, class wide peer tutoring has also proven to be effective for learning with ADHD students [12].

Literature review and meta-analysis studies indicate that the improvements in school performance of students with ADHD are due, mainly, to the decrease in behavioral symptoms characteristic of the disorder; to the increase in the standards of sustained attention ability, as well as to the better results presented in school tasks [6,13]. In addition, it is noteworthy that the effect sizes of school interventions on the behavior of ADHD students are similar to those found only with pharmacological treatment, while in academic performance, the effect sizes of school interventions are greater [6].

From this, it is highlighted the need for more studies of school intervention for students with ADHD and associated learning difficulties, as well as the replication of studies in samples from different cultures to be possible to generalize results and effective guidelines for school teaching targeted and meaningful.

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