

Editorial

Sustained Change in ADHD: Interventions and Variables That Lead to Durable Improvements in Symptoms and Quality of Life

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Attention Deficit/Hyperactivity Disorder (ADHD) is one of the most common conditions in childhood, but it also persists into adolescence and adulthood, showing prevalence rates from 5.3% (95% CI = 5.0, 5.6) ([1] to 7.2% (95% CI = 6.7, 7.8) [2] in children and adolescents, and 2.5% (95% CI = 2.1, 3.1) in adults across the world [3,4]. It is characterized as a persistent pattern of inattention, hyperactivity and/or impulsivity [5], which deals with the following three main presentations of the disorder: inattentive presentation, hyperactive/impulsive presentations and combined presentation.

This disorder commonly causes a significant impairment in important areas of daily life, such as family, school, the workplace and social relationships [6–8], also affecting life satisfaction [9–11]. More specifically, [9] examined impairment and symptoms of ADHD in children and adolescents from six European countries, based on the information provided by parents/caregivers of children/adolescents with ADHD ($n = 535$) and without ADHD ($n = 424$). The results indicated that the ADHD group showed significantly higher levels of school impairment compared with the control group, while they were also more likely to be in the bottom of their class. These results are coherent with other recent studies, indicating that school (and family) might be the most affected context in children and adolescents with ADHD [10,12,13]. In the case of adults, ref. [11] found that ADHD symptoms correlated negatively with life satisfaction, even after demographic factors, such as gender, age or income, and common risk factors (e.g., not being in a relationship, being unemployed) were controlled for.

While ADHD is one of the most frequently diagnosed disorders in childhood, which implies that multiple valid and relievable assessment processes and techniques are systematically being used, the effectiveness of interventions aimed to reduce and or prevent the chronification of some core symptoms of ADHD and associated difficulties is, sometimes, under debate [14]. In this sense, not just variables related to the intervention but also with the individual and their context (either closer contexts, such as family and community factors, or more external variables, such as advances in clinical and education research and practice in the last few years or current events of our society, i.e., COVID-19 confinement) are relevant aspects to consider in order to determine the effectiveness of such interventions, which aim not just to temporarily deal with the main symptoms of the disorder, but to produce a sustained change, an improvement, in the symptoms and quality of life of people with ADHD.

This Special Issue had the following two aims: first, to provide a scenario for presenting and discussing current advances in intervention procedures, from traditional approaches to new techniques, from the perspective of their effectiveness and the durability of their effects; and second, to invite authors to present their findings on the role of personal and contextual variables on the effectiveness of such interventions and the progression of the disorder across the lifespan.

The six articles in this Special Issue are from researchers coming from Iran, Germany, Norway, Spain, the UK, Sweden, Norway and the Netherlands. Five of them are empirical



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studies and imply a total sample of 1216 children and adolescents (aged 6 to 18), and 230 adults (aged 19 to 49), including ADHD, SCT (Sluggish Cognitive Tempo) and non-ADHD clinical or normative samples. The last article is a literature review based on the analysis of 202 articles published in journals under the Social Sciences Citation Index from 2015 to 2019.

Three of the six articles deal with variables around ADHD characteristics, including family (parental mood disorders and laxness, parenting stress, coherence), personal (opponent behavior, executive function deficits, cognitive deficits, anxiety) and contextual variables (confinement related to COVID-19) [15–17]. They use descriptive, predictive and comparative data analyses. One article shows the effects of an intervention based on perceptual-motor skills' reconstruction to improve the executive functions and key symptoms in ADHD, based on a sample of 50 students (8–10 years) equally distributed in a control and an experimental group, following a pretest–posttest design [18]. Additionally, this Special Issue includes a follow-up study based on a 12-year time lapse, where the main aim is to examine the role of family and behavioral and neuropsychological factors when predicting long-term functional outcomes in young adults with ADHD [19]. Last but not least, the bibliometric review that closes this Special Issue provides evidence on the communication gap that still exists between the scientific fields of Psychiatry/Psychology and Education concerning classroom management of ADHD, that is, between science and practice [20].

Overall, five of the six articles highlight the role of an important variable considering the characterization of and intervention in ADHD, which is executive functions, defined as a set of cognitive processes that allow the control of thought, behavior and affection according to the achievement of a goal [21]. These variables, such as inhibitory control, working memory, cognitive flexibility or planning, have been demonstrated to have an important role in predicting current symptoms of ADHD, distinguishing ADHD from other disorders such as SCT, predicting long-term functional involvement, as well as being important factors to incorporate as part of ADHD interventions, based both on the evidence provided in this Special Issue and also in the previous literature [22–25]. This again supports the importance of these components in the identification, interventions and follow-up processes that characterize the current clinical and educational practice in ADHD. Finally, as most of the articles that are part of this Special Issue suggest, and [20] corroborate in their review, future research addressing the personal and contextual variables involved in ADHD characterization and intervention is still needed, hoping that research provides new directions to promote educational and clinical resources to achieve a sustained change and improvement in ADHD symptoms and the quality of life of this population.

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Conflicts of Interest: The authors declare no conflict of interest.

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