

Often Overlooked and Ignored, but Do Not Underestimate Its Relevance: ADHD in Addiction – Addiction in ADHD

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This special issue of European Addiction Research (EAR) ratifies that there is an urgent need to foreground the initially ignored and then underestimated topic of an addiction-ADHD comorbidity, and to acknowledge the 10th anniversary of the International Collaboration on ADHD and Substance Abuse (ICASA: <https://www.adhdandsubstanceabuse.org>) that has dedicated itself to that unmet need.

ADHD and substance use disorders (SUDs) are both common mental disorders that commonly co-occur [1]. In the general population, ADHD occurs in about 6% of children and adolescents and about 2.5% of adults [2, 3]. Combining 27 general population and clinical studies with more than 4,000 ADHD participants and almost 7,000 non-ADHD participants, those with ADHD were about 2–3 times more likely to develop a nicotine, alcohol, marijuana, cocaine, and/or other substance use disorders than those without ADHD [4]. In adult SUD pa-

tients, the prevalence of ADHD is estimated at around 20% [5–7]. Furthermore, SUD patients with comorbid ADHD have an earlier onset of substance use, a faster transition to SUD, and a higher risk of relapse compared to those without ADHD [8–11].

Given the high prevalence and impact of co-occurring ADHD in patients with SUD, this is an important clinical challenge that calls for scientific evidence supporting clinical decision making. To this end, ICASA was founded 10 years ago. Over the past decade, ICASA and others have built a great deal of evidence concerning SUD-ADHD comorbidity. Where ADHD is still often overlooked or ignored in SUD patients, these scientific insights indicate that in patients with SUD, ADHD should be considered a valid and highly relevant psychiatric diagnosis. It is a chronic neurodevelopmental condition, where symptoms of inattention and/or hyperactivity/impulsivity lead to additional impairments in many aspects of living.

Given the high prevalence and impact of ADHD in patients with SUD, screening for ADHD should be part of standard intake procedures in addiction care. Moreover, ADHD can be reliably assessed in patients with SUD even when they are not (yet) fully abstinent [12]. There are several reliable screening and diagnostic tools available for this purpose, as summarized in the ICASA consensus statement on the screening, diagnosis, and treatment of adult SUD patients with comorbid ADHD [13]. In addition, several studies suggest that early stimulant treatment of childhood ADHD can prevent the development of SUD [10, 14–21] and that pharmacotherapy of ADHD can improve outcomes in SUD patients with comorbid ADHD [13, 22]. It should be noted, however, that studies have also shown that the neural response to stimulant treatment in ADHD patients with SUD may differ from the response in ADHD patients without SUD [23] and that – as a consequence – higher doses may be needed in at least some of the patients with ADHD and SUD [24, 25]. These insights are highly relevant for clinical practice and should find their way to (inter)national guidelines.

In addition, there are new insights in the biological underpinnings of the frequent co-occurrence of SUD and ADHD. ADHD and SUD belong to the more heritable psychiatric conditions [26–31], and both twin and genome-wide association studies have indicated a strong shared heritability of ADHD and SUD [32, 33]. These findings suggest that the frequent co-occurrence of these conditions has a shared biological background. Similarly, neurocognitive and neuroimaging studies have identified cognitive control pathways, reward pathways, and emotion regulation pathways to be centrally involved in both conditions [34, 35]. Though these insights further our understanding of this frequent comorbidity, there is still much to learn about the exact causal mechanisms contributing to SUD-ADHD comorbidity.

The 10-year anniversary of ICASA marks a decade of intense and fruitful international collaboration. With this special issue of EAR, we share some of the most recent developments in this field of research with special attention to some new findings from the ICASA network. This special issue contains 6 papers on recently collected data by the ICASA network showing increased severity of SUD and increased severity of smoking in SUD patients with comorbid ADHD compared to those without ADHD (Icick et al., 2020; Sanchez-Garcia et al., 2020, respectively); prevalence data on ADHD in prisoners with SUD (Velez-Patrana et al., 2020); new data on the role of antisocial traits in the development of comor-

bidity between ADHD and SUD (Gonzalez et al., 2020); a review on the role of sustained attention in the diagnosis of patients with SUD-ADHD comorbidity (Slobodin, 2020); and finally a consensus paper concerning the clinical assessment and treatment of adolescents with SUD and ADHD (Özgen et al., 2020). Here we like to emphasize that the ICASA consensus papers (Ozgen et al., 2020; [13]), although important and clinically needed, are no substitution for evidence-based guidelines.

Additionally, several papers are included in this issue focusing on frequent other comorbidities in patients with SUD and ADHD, including PTSD (Luderer et al., 2020), personality traits (Moggi et al., 2020), polysubstance use in SUD patients with and without ADHD (Lugoboni et al., 2020), and the effect of alcohol use and a family history of alcohol dependence on reward-delay aversion in adolescents with ADHD with and without SUDs (Paraskevopoulou et al., 2020).

Based on data presented in this special issue of EAR, we conclude that this field has shown great advancement over the past years, but also that a lot of work has yet to be done. For instance, future studies should address the question concerning personalized treatment of patients with both conditions. For instance, what is the best pharmacological treatment of patients with SUD and ADHD (e.g., stimulants or atomoxetine) and how can robust doses of stimulants be prescribed without the risk of serious side-effects (insomnia, cardiovascular problems, and diversion)? Furthermore, there is a remarkable paucity of data on (integrated) psychological treatment of SUD with comorbid ADHD and the outcome predictors of such interventions [36, 37]. There is an urgent need for evidence concerning which psychological treatments work best for patients suffering both conditions, and how SUD treatment should be adapted when patients have comorbid ADHD, and vice versa. Another major issue in the existing literature is the lack of prospective data on real-life clinical experiences in the treatment of SUD patients with comorbid ADHD. The INCAS study, as presented in this issue (Brynte et al., 2020), will shed light on the course of these disorders when these patients enter addiction care, and provide insight into outcome of different treatment approaches across the participating countries.

Taken together, the SUD-ADHD field is rapidly developing. After 10 years of work, the ICASA group is alive and kicking. New members have been welcomed over the recent years, and several young scientists have joined, dedicating their work to this relevant topic. ICASA strives to foster its work in prevention and clinical

care for patients with SUD and comorbid ADHD through scientific evidence. We wish all readers an inspiring experience when reading this Special Issue.

Disclosure Statement

None of the authors have a conflict of interest to declare.

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