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The combined influence of Attention Deficit Hyperactivity Disorder and childhood Trauma on the Substance Use Disorder severity

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Introduction

Substance Use disorder (SUD) is among the most common psychiatric disorders which affect many people and often cause clinically significant functional impairment and/or distress¹. The negative consequences of SUD are worsened by the fact that this disorder is associated with other psychiatric diagnoses such as Attention Deficit Hyperactivity Disorder (ADHD) and childhood trauma (CT)^{2,3}.

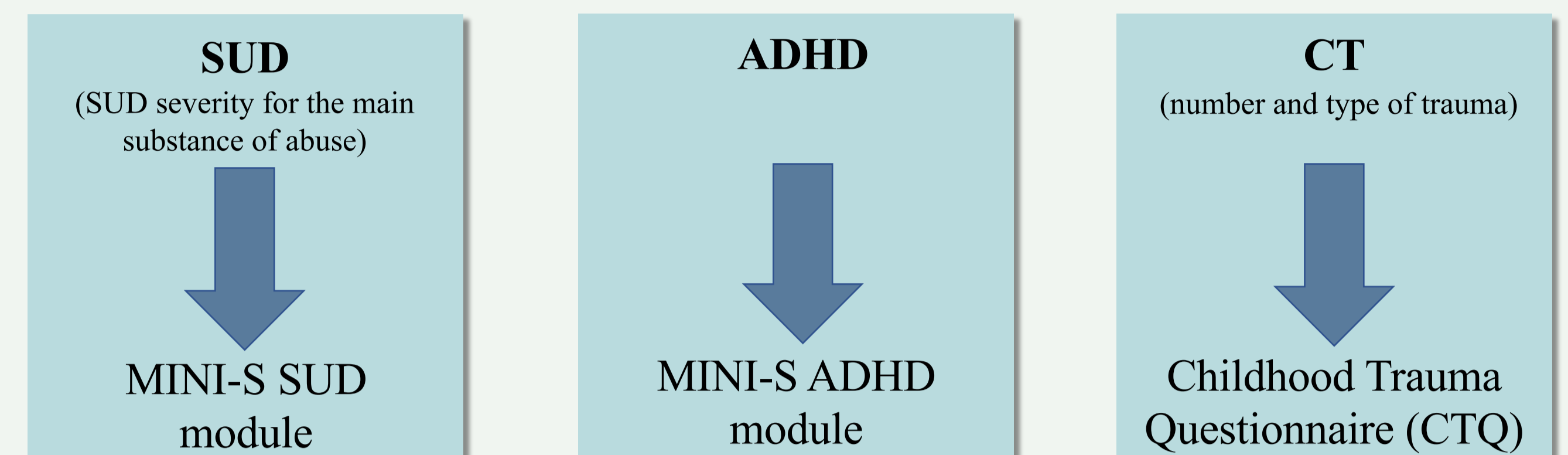
Respectively, **ADHD and CT are identified in 23% and up to 63% patients suffering from Substance Use Disorder (SUD), compared with 2.5% and 28.1%, in the general population⁴. A growing body of evidence suggests a negative influence of both CT and ADHD on SUD, including an increased severity of the SUD^{5,6}. Yet, the combined influence of CT and ADHD on SUD remains poorly understood. Notably, the type and number of CT could elicit different effects on SUDs in ADHD patients.**

Objective of this study : To investigate the frequency of combined ADHD and CT in treatment-seeking SUD outpatients and to characterize their combined influence on the severity of SUDs.

Method

This study was conducted at the Academic Department of Psychiatry and Addiction Medicine at the Fernand-Widal hospital (AP-HP) in Paris, France.

65 outpatients seeking treatment for SUD were consecutively recruited and evaluated with psychometric tools for three variables :



In the whole sample and in ADHD vs. non-ADHD patients, we compared the number of DSM-5 criteria of the main SUD according to the presence vs. absence of any CT, of each CT type, and as a function of the total number of CT types. **We performed Kruskal-Wallis tests, considering statistical significance at $p < 0.05$.**

Results

From 65 outpatients, the mean age was 44 (SD= 13.8), 44 (68%) were men, and 35 (54%) were unemployed at the time of the study. Concerning addictive problems, 49 (75%) participants suffered from a current SUD and 16 (25%) were abstinent. The three main substances consumed were alcohol (N=29, 45%), cannabis (N=13, 20%) and 3-MMC (N=9, 14%).

SUD

According to the MINI-S :

- **52 (80%) patients suffered from severe SUD** (including patients in early remission)
- **55 (85%) patients were poly-drug users.**

ADHD

According to the MINI-S :

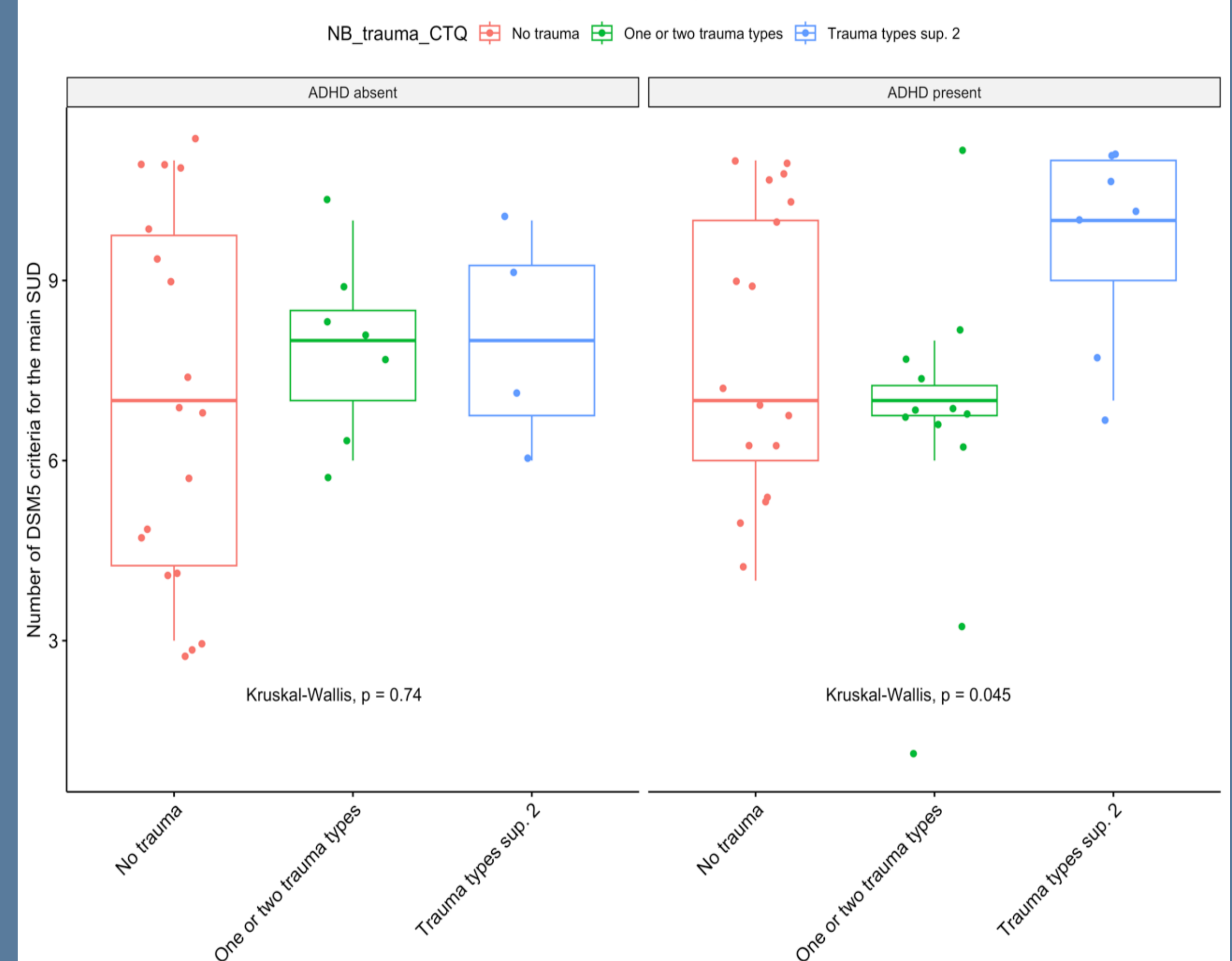
- **36 (55%) patients were diagnosed with ADHD**
- **20 (56%) patients suffered from combined-type ADHD**

CT

According to the CTQ :

- **30 (47%) patients reported at least one type of childhood adverse event**
- Among these patients, **19 (63%) reported to have experienced multiple adverse events**
- The number of CT types were as follows: one, N=11 (37%); two, N=8 (27%), three, N=5 (17%); four, N=5 (17%) and five, N=1 (3%). Emotional neglect was the most reported CT type (N=18, 28%), followed by physical abuse (N=16, 25%), sexual abuse (N=14, 22%), emotional abuse (N=13, 20%) and physical neglect (N=6, 9%).

Number of DSM5 criteria using the MINI as a function of the number of trauma, by ADHD diagnosis. N =65 (whole sample)



In individuals with ADHD, there is a significant increase in the number of SUD criteria between patients without CT, with one or two CT types and with more than two CT types ($p = 0.045$). Therefore, **suffering from ADHD and having experienced more than two types of CT seems to lead to greater severity of SUD.**

Discussion

The present study is one of the first to evaluate the combined effect of ADHD and CT on the severity of SUD and the results underlines the high prevalence of CT and ADHD in adult patients suffering from SUD. These findings demonstrate how **the presence of both ADHD and multiple CT in SUD patients leads to increased SUD severity.** This greater severity of SUD could be the result of a maladaptive response adopted in an attempt to better manage ADHD symptomatology and the symptoms engendered by exposure to multiple CT.

This study confirms the **need for systematic screening for CT and ADHD in the treatment of SUD in order to optimize subsequent treatment.** It is important, however, to take these results with caution. There are potential recruitment biases (high patient severity and frequent comorbidities within this study, research conducted in a hospital specialized in dual disorders, recruitment based on practitioner orientation). **More studies are needed on this subject and this type of study needs to be replicated.**

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