

IMPLICATIONS

Future research should focus on development and tests of tools for screening and diagnosing ADHD in addicted patients.

More knowledge on the topic of ADHD and SUD in (young) adolescents is warranted.

The phenomenon of ADHD presence in treatment seeking SUD patients can no longer be attributed to a USA hype or to biased USA scientific work. Hence, professionals and managers of addiction treatment centers worldwide should work on the detection, diagnosis and treatment of these patients. The severity and consequences for quality of life of both disorders demand this. In addition, in the field of adolescent addiction treatment, professionals should be aware of possible comorbid ADHD.

To date, to the best of our knowledge, there are no results of non-pharmaceutical treatment options for ADHD in SUD patients available. Effects of pharmacological

treatment of adult ADHD in addicted patients is limited on both ADHD symptom outcome and on addiction outcome. Hence, we should seek for clever research designs to test and, if needed, develop effective treatments, both non-pharmacological and pharmacological, for subjects suffering from both ADHD and SUD.

Finally, in the fields of child and adolescent psychiatry and youth care professionals should be aware of the risk for development of SUD in ADHD children and adolescents. Together with people from the clinical field, scientists should develop and test methods for prevention of SUD in children, adolescents and in (young) adults with ADHD.

Short term and long term thorough collaboration in different fields (Addiction care, ADHD care, General mental health, Child & adolescent psychiatry), and in different age categories, between clinical practice and science is warranted to work on the above mentioned tasks.

INFORMATION

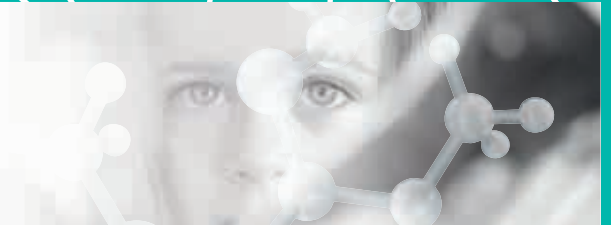
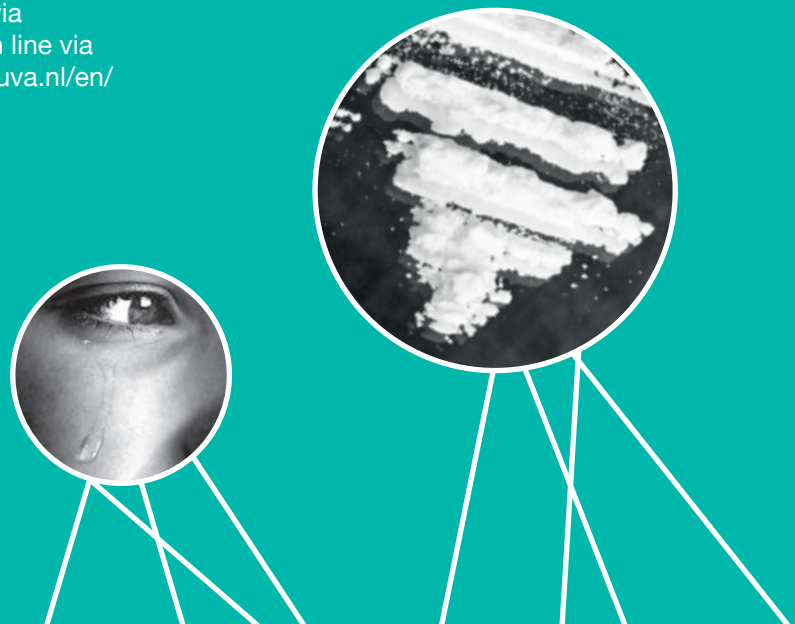
A copy of the thesis can be ordered at €12,50 via nzon@trimbos.nl. The thesis will be available on line via the University of Amsterdam library: <http://uba.uva.nl/en/>

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ADHD

IN TREATMENT SEEKING PATIENTS WITH A SUBSTANCE USE DISORDER A WORLDWIDE PHENOMENON

Challenges for professionals (in mental health, addiction and child and adolescent care), scientists, managers/ policy makers and politicians

The ICASA Foundation presents results of their first international collaborative project, the International ADHD in Substance use disorders Prevalence (IASP) study.

To increase the possibilities of an international comparison of results and to speed up data collection on the topic of ADHD and Substance Abuse, an international research network was initiated: the International Collaboration on ADHD and Substance Abuse (ICASA; www.adhdandsubstanceabuse.org).

The ICASA Foundation uses scientific research to achieve the following two goals:

- 1) increase of the quality of diagnosis and treatment of patients suffering from both SUD and ADHD;
- 2) prevention of the development of SUD in children and adolescents with ADHD.

The IASP results are currently being published in scientific journals, and in a PhD thesis on the topic of ADHD in substance abuse. An overview of the results can be found in this leaflet





INTRODUCTION (chapter 1 and 2)

Substance Use Disorder (SUD) is a brain disease affecting millions of people worldwide. Eventually the majority of patients with a Drug Use Disorder seeks treatment, but often after a delay of many years. In contrast, only a small part of patients with an Alcohol Use Disorder seeks treatment. The more severe the course of addiction, the more likely it is that treatment is sought.

ADHD is a chronic developmental disorder affecting about 6% in children and adolescents and about 2.5% in adults. Many children with ADHD grow up with serious consequences such as educational problems, other psychiatric disorders, social/relationship problems, occupational problems, motor vehicle accidents, suicidal behavior and suicide, and excessive substance use or SUD in later life.

Many treatment seeking SUD patients also have ADHD, however with a broad range of rates in different studies. Moreover, most studies on the prevalence of ADHD in SUD population have been performed in the USA. So far, variability in prevalence rates are mainly ascribed to differences in populations and to methodological issues and inconsistent criteria for the condition in adulthood.

EXPLORATION OF THE TOPIC OF ADHD IN TREATMENT SEEKING ADDICTED PATIENTS (chapter 3 and 4)

In developing a national protocol in the Netherlands for diagnosis and treatment of ADHD in addiction treatment centers we estimated the rate of ADHD in this population to be approximately 12%. Professionals testing the protocol decided that it was possible to diagnose ADHD in this population, and that treatment, including medication

treatment, was useful and could be performed safely and reliable. The majority of patients diagnosed with ADHD had neither been diagnosed nor treated for ADHD before.

In studying the magnitude of ADHD in treatment seeking addicted patients we reviewed the existing scientific literature. We found 12 studies, focused on treatment seeking SUD patients. The prevalence of adult ADHD in this group was 23.3% ranging from 10.0 to 54.1% in individual studies.

THE INTERNATIONAL ADHD IN SUBSTANCE USE DISORDERS PREVALENCE (IASP) STUDY. (chapter 5-8)

We developed the IASP study for achieving the following goals:

- identify the magnitude of the problem of the link between ADHD and SUD, also outside the USA;
- finding causes for the observed variability in rates of ADHD in treatment seeking addicted patients;
- testing the quality of a feasible screener (ASRS) for adult ADHD in the population of treatment seeking addicted patients;
- identifying the pattern of additional psychiatric and personality disorders in addicted patients with and without ADHD.

In eight European countries (Norway, Sweden, the Netherlands, Belgium, France, Spain, Switzerland, Hungary), the USA and Australia, we included 3,575 patients seeking help for Substance Use Disorders. Of these 40.9% scored positive on the adult ADHD screener. However, the prevalence of ASRS positives varied from 20.1% in Switzerland to 60.0% in Norway.

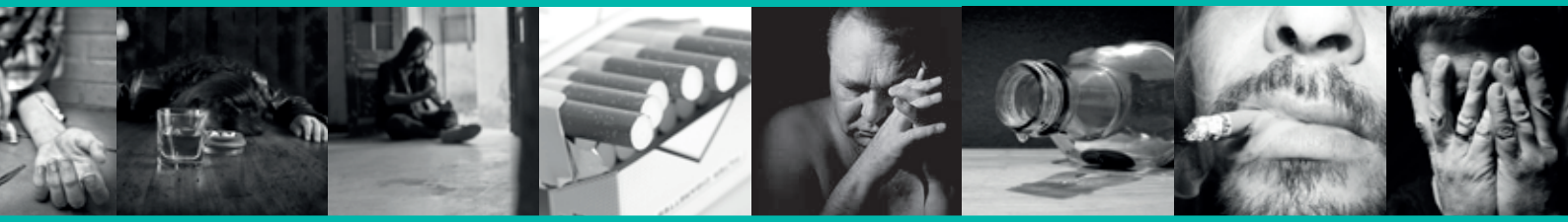
We then tested the quality of the ASRS in a smaller sample of 1,205 patients.

The ASRS proved to be a sensitive screener for the detection of adult ADHD in treatment seeking SUD patients. This means that few patients with a negative score on the ASRS turned out to do have adult ADHD. Still additional state of the art diagnosis by qualified professionals is warranted in ASRS positive patients. It should be noted, however, that the ASRS has only moderate specificity in this population, with the lowest specificity in populations with illicit drugs as their primary substance of abuse. This means that many of the patients scoring positive on the ASRS turn out to not have ADHD.

In our study on the rate of ADHD in treatment seeking addicted patients, three important conclusions were drawn:

- 1) The prevalence of adult ADHD is moderate in treatment seeking SUD patients with alcohol as their main problem substance (5-22%) and higher in





- treatment seeking SUD patients with illicit drugs as their main problem substance (12-57%);
- 2) Applying DSM-5 criteria does not increase the range of prevalence rates dramatically and remains within the ranges for ADHD-NOS based on DSM-IV criteria;
 - 3) Perhaps regions with greater solar intensity, but also country/cultural variables influencing referral and the way addiction treatment centers and (mental) health institutes are organized, may result in different prevalence rates of adult ADHD in treatment seeking SUD patients.

Given these conclusions it seems important not to rely on an overall or average prevalence estimate of treatment seeking SUD populations. Such an estimate needs to be country specific, may be setting specific and is primary substance of abuse specific. Moreover, regardless of country, ADHD is overrepresented in both alcohol and drug patients, in countries outside the USA. It therefore can be concluded that the increased prevalence of adult ADHD in treatment seeking SUD patients is not a USA phenomenon, and therefore, most probably is a world wide phenomenon.

We then tested the presence of Current Major Depression, Current (hypo)manic episode, Antisocial Personality Disorder and Borderline Personality Disorder in treatment seeking addicted patients with and without ADHD. Addicted patients with ADHD had at least one of these disorders in 75% of the cases, whereas this was "only" 37% in addicted patients without ADHD. All tested disorders were more present in addicted patients with ADHD compared to those without ADHD.

The pattern of presence of the disorders differed between ADHD subtypes (inattentive type, hyperactive/impulsive type, combined type) with increased Depression in the inattentive and combined ADHD subtype, increased (Hypo) Manic Episode and Antisocial Personality Disorder in the hyperactive/impulsive ADHD subtype, and the combined ADHD subtype and increased Borderline Personality Disorder in all three subtypes.

We noted that this high prevalence may reflect the presence of common underlying disturbed physiology (in the brain), resulting in different patterns for internalizing and externalizing disorders. As an example we mentioned disturbed inhibition (stop function of the brain) in both externalizing disorders and in addiction.

