

University of Groningen

ADHD & Addiction

van Emmerik-van Oortmerssen, Katelijne

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

2018

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

van Emmerik-van Oortmerssen, K. (2018). *ADHD & Addiction: Prevalence, diagnostic assessment and treatment of ADHD in substance use disorder patients*. [Thesis fully internal (DIV), University of Groningen]. Rijksuniversiteit Groningen.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

CHAPTER 10

INTEGRATED COGNITIVE BEHAVIORAL THERAPY FOR PATIENTS WITH SUBSTANCE USE DISORDER AND COMORBID ADHD: TWO CASE PRESENTATIONS

Katelijne van Emmerik-van Oortmerssen, Ellen Vedel, Wim van den Brink[#],
Robert A. Schoevers[#].

[#] the last two authors contributed equally to this publication

Addictive Behaviors. 2015;45:214-217.

ABSTRACT

Two cases of integrated cognitive behavioral therapy (ICBT) for substance use disorder (SUD) and Attention Deficit Hyperactivity Disorder (ADHD) are presented illustrating that ICBT is a promising new treatment option.

PRESENTATION CASE 1

The patient is a 31-year old single Caucasian man who was referred by his general practitioner to our substance abuse treatment center because of increasing drinking problems. In addition to his problematic alcohol use, he reports being easily distracted, hyperactive and impulsive from childhood on. At intake he drinks about 40 standard drinks three times a week. His alcohol use increased after he started his current job in a recruiting company two years ago, which involved going to business parties. The patient observed a further increase in alcohol use nine months ago after his girlfriend left him. One year ago, the patient sought treatment for his alcohol problems but he dropped out of treatment after the first session.

At the age of 22, he was diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), for which long-acting methylphenidate and psychotherapy were started, but he dropped out of therapy soon. ADHD symptoms have been present in his entire life: in his childhood, he was restless and hyperactive; he could hardly stay at his seat at school. He was easily distracted and made many sloppy mistakes, costing him points at exams. He was very quick-tempered and had several fractures due to rash accidents. During adolescence, his impulsivity started to cause more serious problems; he got involved in a major traffic accident when he tried to escape from the police after a traffic violation. He graduated from high school with daily help from his parents who checked his homework assignments. As a young adult he started his own company, which went bankrupt because of administrative and logistic mismanagement. He then started his current job in a recruitment agency. Here, his functioning has become more and more problematic: he received several warnings from his boss for being late, and for working inefficiently.

Diagnosis, treatment and progress

Based on the standardized intake and allocation procedure, the patient was allocated to outpatient treatment. The following instruments were used for diagnostic assessment and progress monitoring: the Composite International Diagnostic Interview (CIDI vs 2.1)¹ to assess the presence of DSM-IV substance use disorders (SUDs); the Conners' Adult ADHD Diagnostic Interview for DSM-IV (CAADID)² to assess the presence of adult ADHD; the ADHD rating scale³ to monitor ADHD symptoms; the Time Line Follow Back (TLFB)⁴ to monitor self-reported use of substances; the Beck Depression Inventory (BDI)⁵ and Beck Anxiety Inventory (BAI)⁶ to monitor self-reported depressive and anxiety symptoms; and the EQ-5D⁷ for assessing quality of life. From the Time Line Follow Back several substance use measures can be derived. Here we used the number of days with heavy use, defined as six or more standard drinks per day (for male patients) for alcohol, more than 1 joint per day in the case of cannabis, or any use in the case of other illicit drugs, in the two months before assessment.

At intake, the patient meets criteria for DSM-IV alcohol dependence and adult ADHD. ADHD severity is high (ADHD rating scale = 51) and drinking is excessive with 23 heavy drinking days in the two months before intake. Depressive and anxiety symptoms are minimal (BDI =

7; BAI = 2) and quality of life is mildly reduced (EQ-5D = 8).

These results are discussed with the patient. He is concerned about his lack of control of alcohol use and wants to change this drinking behavior. He also expresses the need to work on his ADHD symptoms: at work his inability to concentrate interferes with his responsibilities and at home he suffers from constant restlessness. The patient is offered integrated cognitive behavioral therapy (ICBT), which simultaneously addresses his substance use disorder and his ADHD. For a description of ICBT, the reader is referred to van Emmerik-van Oortmerssen et al.⁸ In short, ICBT is an integrated treatment based on a combination of two evidence-based CBT programs; one for the treatment of SUD⁹ and one for the treatment of ADHD.¹⁰ It has two phases with a total of 15 one-hour sessions. Phase I consists of four sessions and focuses on stopping or reducing substance use. Phase II consists of 11 sessions and encompasses treatment for both SUD and ADHD. Although we advise patients to pursue (at least temporary) abstinence in Phase I, some patients do not want this, in which case we make agreements on a controlled form of substance use. Because substance use can interfere with proper ADHD assessment, abstinence is pursued in these first four sessions, after which the diagnostic assessment of ADHD is repeated. ICBT (phase II) only starts when the ADHD diagnosis is reconfirmed after these four initial sessions. We also think that stabilization of substance use is necessary for patients to benefit from the ADHD treatment in phase II.

The patient consents to the treatment. In the first two sessions, motivational interviewing techniques are used and treatment goals are defined. The patient wants to reduce his alcohol use to a maximum of five drinks per day with a maximum of two drinking days per week. In the third and fourth sessions, self control techniques are trained and risk situations are identified. During these sessions, it soon becomes apparent that the treatment goal of drinking five drinks per day on two days per week is not realistic, because the patient is not able to limit his alcohol use according to plan. The patient and therapist decide to set a new goal for treatment: complete abstinence for a period of two weeks, after which a new goal will be defined. After the fourth session, the patient is indeed able to abstain from alcohol. The CAADID is then repeated, confirming the ADHD diagnosis.

In phase II, all sessions address both substance use and ADHD treatment. Each session starts with a review of the homework assignments, which, apart from additional assignments, always include registration of the substance use since the last session and an evaluation of the actual planning and organization skills. The remainder of the session is used for training new skills for either SUD or ADHD in an alternating way. In session five, a calendar and notebook are introduced for the treatment of ADHD. The patient is instructed to write down all his tasks in a notebook, assign scores to the tasks reflecting the urgency of the task and subsequently plan his tasks in the calendar. In session six, the patient already reports that this is helpful in creating more overview in his working tasks and that it reduces the stress. Other planning and organizing skills that are addressed are managing overwhelming tasks by dividing them into smaller parts, and structuring administration and paperwork. Techniques to reduce distractibility are presented as well as coping with mood problems.

The SUD treatment in sessions 5-15 involves a functional analysis of substance abusing behavior, training strategies to cope with craving, dealing with lapses and preventing relapse, and training skills to refuse alcohol offers. Weekly registrations show that the patient has occasional lapses in alcohol use, but is able to remain abstinent most of the time. The treatment is concluded with an evaluation in session 15. The patient reports that the treatment has not only helped him to control his alcohol use (he occasionally drank limited amounts of alcohol), but has also provided him skills to become more efficient at work. Meanwhile, he has acquired a better job position with more responsibilities and he also reports having a new relationship.

In the post-treatment assessment administered one week after the last session, the ADHD rating scale score is down from 51 to 21 (mild symptoms) and the number of heavy drinking days is reduced from 23 to 1 in the two months prior to the assessment. Depressive symptoms are down from a BDI score of 7 to 0 and anxiety symptoms remain (virtually) absent (BAI score went from of 2 to 1). Quality of life improved with an EQ-5D score that is down from 8 to 6.

In the two-month follow-up assessment, treatment gains are largely maintained as evidenced by the following scores: ADHD rating scale score is stable at 22, number of heavy drinking days is three in the two months prior to the assessment, depressive and anxiety symptoms are virtually absent (BDI = 0, BAI = 1), and quality of life is unchanged (EQ-5D = 6). (See Figs 1 and 2.)

Figure 1: ADHD rating scale score of patient 1 at baseline, post-treatment and follow-up assessment.

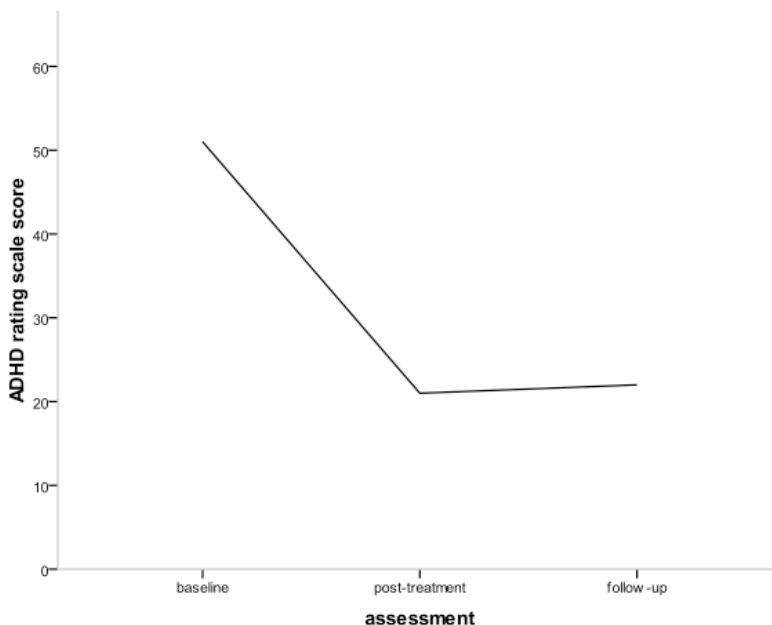
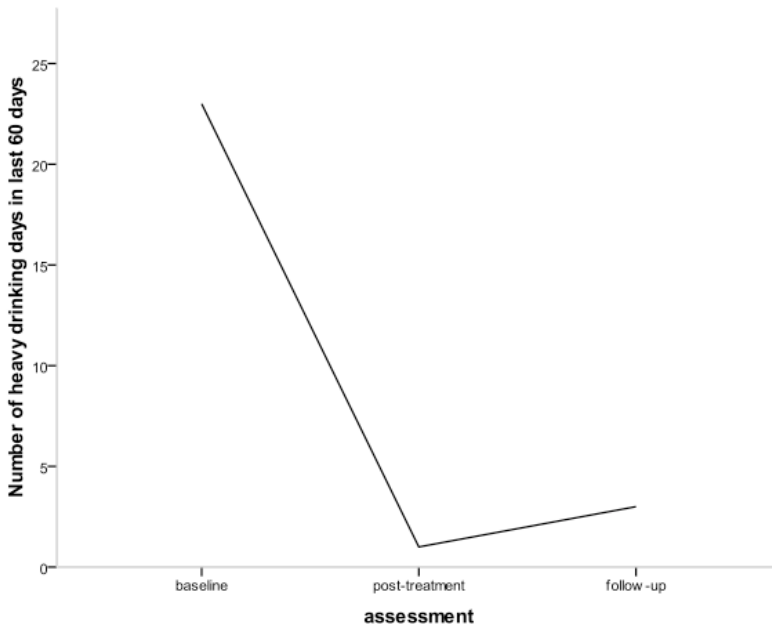


Figure 2: number of heavy drinking days of patient 1 in last 60 days at baseline, post-treatment and follow-up assessment.



PRESENTATION CASE 2

The patient is a 25-year old single Caucasian man, who was referred to our substance abuse treatment center because of daily heavy cannabis use. Two years ago he had entered treatment for cannabis abuse but after four weeks of abstinence he relapsed and dropped out of treatment. During intake he reports using 2-3 gram cannabis a day. He started using cannabis when he was 16, after the divorce of his parents. His clinical history revealed several ADHD symptoms: as a pre-school child he was hyperactive; at elementary school he performed unpredictably because of concentration problems, careless mistakes and day-dreaming; at secondary school he displayed behavioral problems, leading to suspension from school, repeating a class, and severe under-achievement; and after his graduation from higher vocational education he had many jobs for short periods and repeatedly got into trouble because of absenteeism and lying. He recently had to quit his job as a project manager for this reason. He now feels ashamed and is afraid that his lying will again turn against him.

Diagnosis, treatment and progress

Based on the standardized intake and allocation procedure, the patient is allocated to outpatient treatment. At intake, the patient meets DSM-IV criteria for both cannabis dependence and adult ADHD. ADHD severity is high (ADHD rating scale score = 48) and

he smokes more than one joint every day in the two months before intake. Depressive and anxiety symptoms are moderately high (BDI = 15; BAI = 20) and quality of life is mildly reduced (EQ-5D = 8).

The results of the diagnostic assessment are discussed with the patient, and the potential usefulness of ICBT is explained. He realizes that both his cannabis use and his current ADHD symptoms interfere with his functioning and he consents to start ICBT. In the first session, current cannabis use, earlier treatment experiences, and possible treatment aims and options are discussed. He discloses that he has found it difficult to be honest about his cannabis use during the previous treatment two years ago. His treatment goal is to stop using cannabis and he agrees to a one week inpatient detoxification as a starting point for further outpatient therapy. A screening appointment with the physician is made before admission, but this appointment is canceled by the patient. He does not plan a new appointment, nor does he respond to telephone calls or letters in the weeks thereafter. Eventually, his registration in the treatment center is ended.

DISCUSSION

Adult ADHD frequently co-occurs with substance use disorders. In a recent multinational study using the same classification and diagnostic procedure in all centers, we found that the prevalence of adult ADHD in treatment seeking SUD patients ranged from 5% to 31% depending on country, treatment setting and primary substance of abuse.¹¹ Due to overlapping symptoms of intoxication or withdrawal and ADHD, specific attention needs to be paid to a proper diagnosis with a confirmation of the ADHD diagnosis after intoxication and withdrawal symptoms have disappeared. In our randomized controlled trial of ICBT,⁸ the structured diagnostic assessment at intake is repeated after attaining stable abstinence or stabilization of reduced alcohol or drug use. Comorbidity of ADHD in SUD patients is associated with a range of negative outcomes. For example, SUD patients with a comorbid ADHD diagnosis start abusing substances at a younger age, tend to use more substances and are hospitalized more often than SUD patients without ADHD.¹² Moreover, substance use disorder treatments¹³ and the pharmacological treatment of ADHD are less successful in comorbid patients: e.g. most double-blind randomized controlled trials failed to show efficacy of methylphenidate for the treatment of ADHD symptoms in SUD patients.¹⁴ Recent studies have shown positive effects of CBT in ADHD patients without SUD,¹⁵ but this has not been studied in patients with co-occurring SUD and ADHD. Finally, it should be noted that both disorders seem to share genetic characteristics,¹⁶ show similar structural and functional brain abnormalities^{17, 18} and have overlapping symptoms and functional consequences. Together, this suggests that an integrated treatment of SUD and ADHD symptoms in these dual diagnosis patients may improve outcome.

Our ICBT approach is characterized by simultaneous treatment of SUD and ADHD which we believe has advantages over sequential treatments. Becoming abstinent is of course a vital first step in treatment, but this immediately reveals functional problems associated with

the inability to organize one's life that directly interfere with addiction treatment.¹⁹ Training planning skills is in our opinion crucial not only to reduce these problems, but also to maintain abstinence by planning ahead and avoid risky situations regarding substance use. Finally, planning skills may also increase treatment adherence because the risk of missing appointments is reduced. By developing an integrated therapy on the basis of two evidence-based approaches, and in light of relative ineffectiveness of pharmacotherapy, we aimed to improve treatment outcome for patients with ADHD and SUD, but randomized controlled trials are needed to establish the efficacy of ICBT (van Emmerik-van Oortmerssen et al., 2013).⁸ The cases presented here illustrate the difficulties of treatment of patients with SUD and ADHD with early drop out being a major challenge.

CONCLUSION

These case presentations suggest that a combined, integrated treatment for substance use disorders and ADHD is a promising new treatment option, but drop-out remains a major challenge in this dual-diagnosis patient population. Further research on the efficacy of ICBT compared to regular addiction treatment is warranted, as well as research on strategies to enhance treatment retention.

ACKNOWLEDGEMENTS

The presented treatments were carried out in the framework of a randomized controlled trial (RCT) to test the efficacy of the integrated treatment for adult treatment seeking SUD patients with comorbid ADHD. We thank Fonds NutsOhra for providing funding for the RCT (project number 1001-036).

REFERENCES

1. World Health Organization. *Composite International Diagnostic Interview (CIDI) (version 2.1)*. Amsterdam: Training and Reference Center, Psychiatric Center APC; 1997.
2. Epstein JN, Johnson D, Conners CK. *Conners' Adult ADHD Diagnostic Interview for DSM-IV*. North Tanawanda (NY): Multi-Health Systems Inc.; 2000.
3. Kooij JJ, Boonstra A, Swinkels SH, Bekker EM, de Noord I, Buitelaar JK. Reliability, validity, and utility of instruments for self-report and informant report concerning symptoms of ADHD in adult patients. *J Atten Disord*. 2008;11:445-458.
4. Sobell LC, Sobell MB. Timeline Follow-Back: a technique for assessing self-reported ethanol consumption. In: Allen J, Litten RZ, eds. *Measuring Alcohol Consumption: Psychosocial and Biochemical Methods*. Totowa: Humana Press; 2012:41-72.
5. Beck AT, Steer RA. *Beck Depression Inventory-Manual*. New York: Harcourt Brace Jovanovich, Psychological Corporation; 1987.
6. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. *J Consult Clin Psychol*. 1988;56:893-897.
7. The EuroQol Group. EuroQol – a new facility for the measurement of health-related quality of life. *Health Policy*. 1990;16:199-208.
8. van Emmerik-van Oortmerssen K, Vedel E, Koeter MW, de Bruijn K, Dekker JJM, van den Brink W, Schoevers RA. Investigating the efficacy of integrated cognitive behavioral therapy for adult treatment seeking substance use disorder patients with comorbid ADHD: Study protocol of a randomized controlled trial. *BMC Psychiatry*. 2013;13:132.
9. de Wildt WAJM. Lifestyle training program, therapist guide [Achilles Leefstijl 2, werkboek trainer]. Amsterdam: Boom; 2001.
10. Safren SA, Perlman CA, Sprich S, Otto MW. *Mastering your adult ADHD: a cognitive-behavioral therapy approach*. New York: Oxford University Press; 2005.
11. van de Glind G, Konstenius M, Koeter MW, van Emmerik-van Oortmerssen K, Carpentier PJ, Kaye S, Degenhardt L, Skutle A, Franck J, Bu ET, Moggi F, Dom G, Verspreet S, Demetrovics Z, Kapitány-Fövényi M, Fatséas M, Auriacombe M, Schillinger A, Møller M, Johnson B, Faraone SV, Ramos-Quiroga JA, Casas M, Allsop S, Carruthers S, Schoevers RA, Wallhed S, Barta C, Alleman P, IASP Research Group, Levin FR, van den Brink W. Variability in the prevalence of adult ADHD in treatment seeking substance use disorder patients: Results from an international multi-center study exploring DSM-IV and DSM-5 criteria. *Drug Alcohol Depend*. 2014;134:158-166.
12. Arias AJ, Gelernter J, Chan G, Weiss RD, Brady KT, Farrer L, Kranzler HR, 2008. Correlates of co-occurring ADHD in drug-dependent subjects: prevalence and features of substance dependence and psychiatric disorders. *Addict. Behav*. 2008;33:1199-1207.
13. Ercan ES, Coskunol H, Varan A, Toksoz K. Childhood attention deficit/hyperactivity disorder and alcohol dependence: a 1-year follow-up. *Alcohol Alcohol*. 2003;38:352-356.
14. Castells X, Ramos-Quiroga JA, Rigau D, Bosch R, Nogueira M, Vidal X, Casas M. Efficacy of methylphenidate for adults with attention-deficit hyperactivity disorder: a meta-regression analysis. *CNS Drugs*. 2011;25:157-169.
15. Safren SA, Sprich S, Mimiaga MJ, Surman C, Knouse L, Groves M, Otto MW. Cognitive behavioral therapy vs relaxation with educational support for medication-treated adults with ADHD and persistent symptoms: a randomized controlled trial. *JAMA*. 2010;304:875-880.
16. Biederman J, Petty CR, Wilens TE, Fraire MG, Purcell CA, Mick E, Monuteaux MC, Faraone SV. Familial

- risk analyses of attention deficit hyperactivity disorder and substance use disorders. *Am J Psychiatry*. 2008;165:107-115.
17. Crunelle CL, Veltman DJ, van Emmerik-van Oortmerssen K, Booij J, van den Brink W. Impulsivity in adult ADHD patients with and without cocaine dependence. *Drug Alcohol Depend*. 2013;129:18-24.
 18. Frodl T. Comorbidity of ADHD and Substance Use Disorder (SUD): a neuroimaging perspective. *J Atten Disord*. 2010;14:109-120.
 19. Wilens TE, Morrison NR. The intersection of attention-deficit/hyperactivity disorder and substance abuse. *Curr. Opin. Psychiatry*. 2011;24:280-285.