

Association between Attention Deficit/Hyperactivity Disorder (ADHD) and craving among patients with Alcohol Use Disorders (AUD)

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Objectives

Adult ADHD is associated with an earlier initiation of substance abuse, a more rapid transition from use to dependence and a reduced likelihood of remission¹. Craving is a crucial concept in diagnosis, etiology and treatment of AUD². Clinical experiences give rise to the suspicion that patients with AUD and ADHD may suffer more from craving than AUD only patients. The purpose of this study is to examine the association between ADHD and craving among patients who enter an inpatient treatment for AUD.

Methods

In the International ADHD in Substance use disorders Prevalence study (IASP) of the International Collaboration on ADHD and Substance Abuse (ICASA), substance use disorder treatment programs of nine European countries, the USA, South Africa and Australia are collecting data on ADHD and comorbid disorders. In the Swiss IASP study, 400 patients with an AUD were recruited in three inpatient treatment programs. On average, patients were 44.5 years old (SD 10.90) and stayed in the clinic for 71.2 days (SD 45.94). Almost two thirds (64.7%) were male, 35.3% were female.

| | ASRS positive (n=74) | | ASRS negative (n=311) | | test statistics (t / χ^2) |
|--|----------------------|-------|-----------------------|-------|---------------------------------|
| | M / % | SD | M / % | SD | |
| age | 40.4 | 10.25 | 45.2 | 11.12 | 3.38 *** |
| gender (m / w) | 64.9 / 35.1 | | 65.0 / 35.0 | | |
| additional substance use (30 days before detox) | 45.9 | | 22.5 | | 16.66 *** |
| Alcohol Craving (OCDS) | 23.2 | 7.64 | 18.9 | 7.69 | -4.19 *** |
| Obsessions | 7.6 | 4.44 | 7.5 | 4.65 | -3.92 *** |
| Compulsions | 9.8 | 3.83 | 11.4 | 3.81 | -3.95 *** |
| alcohol consumption (>5 standard drinks, 30 days before detox) | 97.2 | | 87.2 | | 5.85 * |
| sum of withdrawal symptoms (SSW) | 8.5 | 3.89 | 6.4 | 3.85 | -4.32 *** |
| severity of withdrawal symptoms (SSW) | 3.7 | 1.00 | 3.1 | 1.14 | -3.41 *** |
| Brief Symptom Inventory (BSI) | 37.6 | 18.01 | 22.7 | 16.79 | -6.71 *** |
| Positive Symptom Total (PST) | 38.3 | 11.60 | 27.8 | 13.76 | -6.11 *** |
| Positive Symptom Distress Index (PSDI) | 2.1 | 0.60 | 1.69 | 0.57 | -5.51 *** |

Note: Sample size N=385 (due to missing data), * p<.05, *** p<.001

Patients were assessed by the Adult ADHD Self-Report Scale (ASRS)³, the Obsessive Compulsive Drinking Scale (OCDS)^{2,4}, the Screening for Substance Use Disorders (SSUD)⁵, the Screening for Symptoms of Withdrawal (SSW) and the Brief Symptom Inventory (BSI)⁶. On the ASRS, 74 patients (18.4%) screened positive. AUD patients with and without ADHD were compared on craving, withdrawal and psychiatric symptoms.

Results

Patients with adult ADHD were younger, showed higher craving and more withdrawal and psychiatric symptoms than patients without ADHD. They also rated withdrawal symptoms as more severe, stated more often additional substance use and showed higher amount of alcohol consumption 30 days before detox.

| | R | R ² | Adjusted R ² | Std. Error of the Estimate | Change Statistics | | | | |
|---|-------------------|----------------|-------------------------|----------------------------|-----------------------|----------|-----|-----|---------------|
| | | | | | R ² Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .198 ^a | .039 | .033 | 7.93 | .039 | 6.42 | 2 | 314 | .002 |
| 2 | .264 ^b | .070 | .061 | 7.82 | .030 | 10.23 | 1 | 313 | .002 |
| 3 | .430 ^c | .185 | .169 | 7.35 | .115 | 14.55 | 3 | 310 | .000 |
| 4 | .630 ^d | .397 | .380 | 6.35 | .213 | 36.15 | 3 | 307 | .000 |

a Predictors: age, sex

b Predictors: age, sex, outcome ASRS

c Predictors: age, sex, outcome ASRS, gastrointestinal symptoms, anxiety/agitation, sweating

d Predictors: age, sex, outcome ASRS, gastrointestinal symptoms, anxiety/agitation, sweating, depression, obsessive-compulsive behavior, interpersonal sensitivity

e. Dependent Variable: Alcohol Craving

In the hierarchical regression model about 10% of variance in alcohol craving can be explained by ADHD, whereas 30% of the variance can be explained by withdrawal symptoms (gastrointestinal symptoms, anxiety/agitation, sweating) and psychiatric symptoms (depression, obsessive-compulsive behavior, interpersonal sensitivity).

Conclusion

Alcohol craving is more likely related to subjective rating of withdrawal and psychiatric symptoms than to adult ADHD. The validity of the ASRS needs to be further examined by the large data set of the IASP study of ICASA.

Limitations may challenge findings in this study. The two groups differ in size and patients who suffered from ADHD symptoms were more willing to participate. Furthermore, withdrawal symptoms may be associated with craving which makes it difficult to disentangle the two concepts.

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Literature

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