

Original Research

Evaluation of adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome

¹Sachin Kawaduji Nale, ²Brajendra Kumar Singh

¹Assistant Professor, Department of Community Medicine, Rajeshree Medical Research Institute, Bareilly, Uttar Pradesh, India;

²Assistant Professor, Department of Psychiatry, Major S D Singh Medical College & Hospital, Farukhabad, Uttar Pradesh, India

ABSTRACT:

Background: Attention-deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder characterized by persistent patterns of inattention, hyperactivity, and impulsivity that interfere with daily functioning and development. The present study was conducted to evaluate adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome. **Materials & Methods:** 146 patients with opioid-dependence syndrome of both genders were assessed using the Mini International Neuropsychiatric Interview, 5.0, adult ADHD self-report screening scale, and Maudsley Addiction Profile. Sociodemographic, substance use, and clinical variables were compared in those who screened positive for adult ADHD (ADHD+) were compared with those screened negative (ADHD-). **Results:** Marital status was unmarried/separated/divorced in 60, married/widowed in 86 subjects. Education level was primary level in 78 and secondary level in 68. Family type was alone in 90 and nuclear in 56. Type of opioid use was heroin in 38, natural opioid (opium etc.) in 80, prescription opioids in 22 and mixed in 6 subjects. Comorbid substance use was alcohol dependence in 24, cannabis dependence in 22, sedative/hypnotic dependence in 36, and nicotine dependence in 64 subjects. In ADHD positive and ADHD negative patients, mean COWS score was 1.87 and 1.12 respectively. The mean physical health score was 16.8 and 14.2. The mean anxiety score was 6.5 and 4.7. The mean depression score was 8.9 and 5.2 respectively. The difference was significant ($P < 0.05$). **Conclusion:** There was high prevalence of adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome.

Keywords: Attention-deficit hyperactivity disorder, opioid-dependence syndrome, alcohol

Corresponding author: Brajendra Kumar Singh, Assistant Professor, Department of Psychiatry, Major S D Singh Medical College & Hospital, Farukhabad, Uttar Pradesh, India

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INTRODUCTION

Attention-deficit hyperactivity disorder (ADHD) is a neurodevelopmental disorder characterized by persistent patterns of inattention, hyperactivity, and impulsivity that interfere with daily functioning and development.¹ ADHD typically begins in childhood and can persist into adulthood.² Symptoms include difficulty sustaining attention, making careless mistakes, difficulty organizing tasks, easily distracted by extraneous stimuli, forgetfulness, fidgeting, restlessness, difficulty staying seated, excessive talking, constantly on the go, acting without thinking, interrupting others, difficulty waiting for turns, blurting out answers.³

Increased incidence of substance use disorders (SUDs) in adulthood have been linked to ADHD. Additionally, people with ADHD rates appear to be higher

in those with SUDs than in the general population. According to a meta-analysis, 23.1% of people with SUDs have ADHD. Over 15 million people worldwide suffer from opioid use disorder, which has a chronic relapsing trajectory.⁴ The illness is linked to significant social, financial, and medical expenses.

Patients with SUDs continue to receive inadequate diagnosis and treatment for ADHD. It can be difficult to treat ADHD patients who also have concomitant SUD, especially because of worries about methylphenidate—a stimulant—being diverted. Formulating suggestions on this topic is equally challenging due to the paucity of published evidence.⁵ Nonetheless, there is some data indicating that medication may be used to treat ADHD symptoms in opioid-dependent patients. Less than 3% of individuals receiving treatment for opioid dependence

appear to have been provided medications for ADHD, indicating a significant treatment gap.⁶The present study was conducted to evaluate adult attention-deficit hyperactivity disorders among patients with opioid-dependence syndrome.

MATERIALS & METHODS

The present study consisted of 146 patients with opioid-dependence syndrome of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Patients were assessed using the Mini International Neuropsychiatric Interview. 5.0, adult ADHD self-report screening scale, and Maudsley Addiction Profile. Those who screened positive for adult ADHD (ADHD+) were compared with those screened negative (ADHD-) on a number of sociodemographic, substance use, and clinical variable. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Sociodemographic data

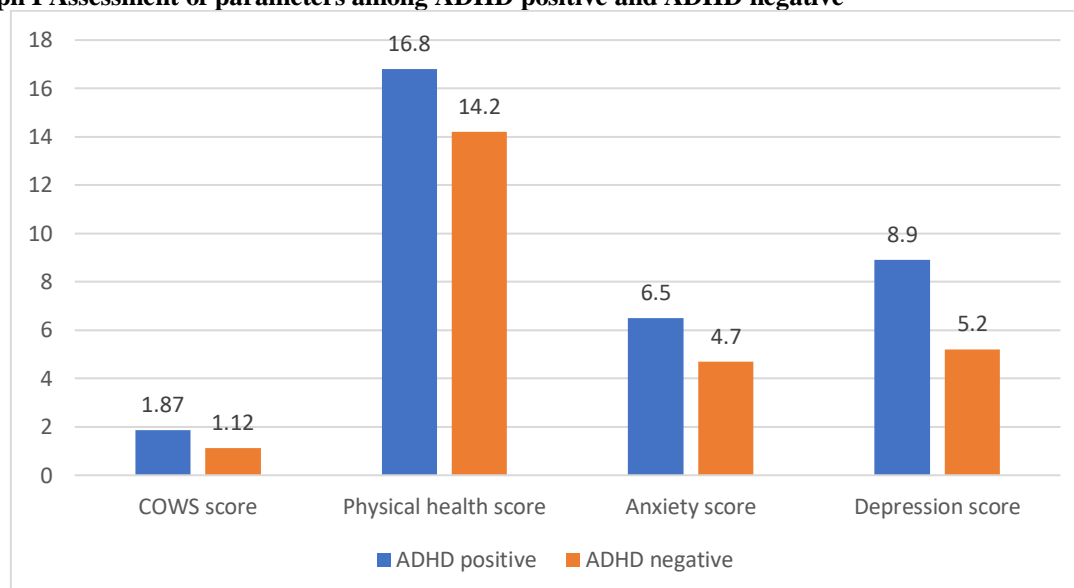
Parameters	Variables	Number	P value
Marital status	Unmarried/separated/divorced	60	0.05
	Married/widowed	86	
Education	primary level	78	0.82
	Secondary level	68	
Family type	Alone	90	0.02
	Nuclear	56	
Type of opioid use	Heroin	38	0.01
	Natural opioid (opium etc.)	80	
	Prescription opioids	22	
	Mixed	6	
Comorbid substance use	Alcohol dependence	24	0.93
	Cannabis dependence	22	
	Sedative/hypnotic dependence	36	
	Nicotine dependence	64	

Table I shows that marital status was unmarried/separated/divorced in 60, married/widowed in 86 subjects. Education level was primary level in 78 and secondary level in 68. Family type was alone in 90 and nuclear in 56. Type of opioid use was heroin in 38, natural opioid (opium etc.) in 80, prescription opioids in 22 and mixed in 6 subjects. Comorbid substance use was alcohol dependence in 24, cannabis dependence in 22, sedative/hypnotic dependence in 36, and nicotine dependence in 64 subjects. The difference was significant (P< 0.05).

Table II Assessment of parameters among ADHD positive and ADHD negative

Parameters	ADHD positive (84)	ADHD negative (62)	P value
COWS score	1.87	1.12	0.05
Physical health score	16.8	14.2	0.04
Anxiety score	6.5	4.7	0.02
Depression score	8.9	5.2	0.01

Table II, graph I shows that in ADHD positive and ADHD negative patients, mean COWS score was 1.87 and 1.12 respectively. The mean physical health score was 16.8 and 14.2. The mean anxiety score was 6.5 and 4.7. The mean depression score was 8.9 and 5.2 respectively. The difference was significant (P< 0.05).

Graph I Assessment of parameters among ADHD positive and ADHD negative

DISCUSSION

ADHD can affect various aspects of daily life, including academic performance, social relationships, and occupational functioning.^{7,8} Early identification and intervention are important for minimizing the impact of ADHD on overall functioning and quality of life. ADHD commonly coexists with other conditions, such as learning disabilities, anxiety disorders, depression, and oppositional defiant disorder (ODD).⁹ Comprehensive assessment and treatment may be needed to address these coexisting conditions effectively.¹⁰ While ADHD is often diagnosed in childhood, symptoms can persist into adolescence and adulthood. Proper management and support across the lifespan are important for optimizing outcomes and reducing long-term impairment.^{11,12} The present study was conducted to evaluate adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome.

We found that marital status was unmarried/separated/divorced in 60, married/widowed in 86 subjects. Education level was primary level in 78 and secondary level in 68. Family type was alone in 90 and nuclear in 56. Type of opioid use was heroin in 38, natural opioid (opium etc.) in 80, prescription opioids in 22 and mixed in 6 subjects. Comorbid substance use was alcohol dependence in 24, cannabis dependence in 22, sedative/hypnotic dependence in 36, and nicotine dependence in 64 subjects. Gupta et al¹³ studied the prevalence of adult ADHD among individuals with opioid dependence and its correlates, and evaluated the attitude of the individuals with adult ADHD toward its treatment. The survey was conducted in 132 consecutive inpatients with opioid-dependence syndrome. Patients were assessed using the Mini International Neuropsychiatric Interview. 5.0, adult ADHD Self-Report Screening Scale, and Maudsley Addiction Profile. About a fifth (n=24, 18.2%) of the patients with opioid dependence

screened positive for adult ADHD. One-third of the participants (n=8, 33.3%) were willing for the treatment of any kind, and only a half (n=3) was willing to pay. Earlier age of onset of opioid use (relative risk: 0.01; 95% confidence interval: 0.003, 0.85; P = 0.036) had higher likelihood to ADHD+ status.

We found that in ADHD positive and ADHD negative patients, mean COWS score was 1.87 and 1.12 respectively. The mean physical health score was 16.8 and 14.2. The mean anxiety score was 6.5 and 4.7. The mean depression score was 8.9 and 5.2 respectively. Van Emmeriket al¹⁴ determined comorbidity patterns in treatment-seeking substance use disorder (SUD) patients with and without adult attention deficit hyperactivity disorder (ADHD). The prevalence of DSM-IV adult ADHD in this SUD sample was 13.9%. ASPD [odds ratio (OR) = 2.8, 95% confidence interval (CI) = 1.8-4.2], BPD (OR = 7.0, 95% CI = 3.1-15.6 for alcohol; OR = 3.4, 95% CI = 1.8-6.4 for drugs), MD in patients with alcohol as primary substance of abuse (OR = 4.1, 95% CI = 2.1-7.8) and HME (OR = 4.3, 95% CI = 2.1-8.7) were all more prevalent in ADHD(+) compared with ADHD(-) patients (P < 0.001). These results also indicate increased levels of BPD and MD for alcohol compared with drugs as primary substance of abuse. Comorbidity patterns differed between ADHD subtypes with increased MD in the inattentive and combined subtype (P < 0.01), increased HME and ASPD in the hyperactive/impulsive (P < 0.01) and combined subtypes (P < 0.001) and increased BPD in all subtypes (P < 0.001) compared with SUD patients without ADHD. Seventy-five per cent of ADHD patients had at least one additional comorbid disorder compared with 37% of SUD patients without ADHD.

The limitation of the study is the small sample size.

CONCLUSION

Authors found that there was high prevalence of adult attention deficit hyperactivity disorders among patients with opioid-dependence syndrome.

Psychiatric comorbidity in treatment-seeking substance use disorder patients with and without attention deficit hyperactivity disorder: Results of the IASP study. *Addiction* 2014;109:262-72.

REFERENCES

1. Fatseas M, Debrabant R, Auriacombe M. The diagnostic accuracy of attention-deficit/hyperactivity disorder in adults with substance use disorders. *Curr Opin Psychiatry* 2012;25:219-25.
2. Eme R. Male adolescent substance use disorder and attention-deficit hyperactivity disorder: A review of the literature. *Int Sch Res Not* 2013. Available from: <https://www.hindawi.com/journals/isrn/2013/815096/>. [Last accessed on 2019 Sep 13].
3. Matthys F, Soyez V, van den Brink W, Joostens P, Tremmery S, Sabbe B. Barriers to implementation of treatment guidelines for ADHD in adults with substance use disorder. *J Dual Diagn* 2014;10:130-8.
4. Kalbag AS, Levin FR. Adult ADHD and substance abuse: Diagnostic and treatment issues. *Subst Use Misuse* 2005;40:1955-81.
5. Arias AJ, Gelernter J, Chan G, Weiss RD, Brady KT, Farrer L, et al. Correlates of co-occurring ADHD in drug-dependent subjects: Prevalence and features of substance dependence and psychiatric disorders. *Addict Behav* 2008;33:1199-207.
6. Tamm L, Trello-Rishel K, Riggs P, Nakonezny PA, Acosta M, Bailey G, et al. Predictors of treatment response in adolescents with comorbid substance use disorder and attention-deficit/hyperactivity disorder. *J Subst Abuse Treat* 2013;44:224-30.
7. Storebø OJ, Rasmussen PD, Simonsen E. Association between insecure attachment and ADHD: Environmental mediating factors. *J Atten Disord* 2016;20:187-96.
8. Gerra G, Leonardi C, Cortese E, Zaimovic A, Dell'agnello G, Manfredini M, et al. Homovanillic acid (HVA) plasma levels inversely correlate with attention deficit-hyperactivity and childhood neglect measures in addicted patients. *J Neural Transm (Vienna)* 2007;114:1637-47.
9. Jacobsen T, Huss M, Fendrich M, Kruesi MJ, Ziegenhain U. Children's ability to delay gratification: Longitudinal relations to mother-child attachment. *J Genet Psychol* 1997;158:411-26.
10. Khantzian EJ. The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harv Rev Psychiatry* 1997;4:231-44.
11. Lugoboni F, Levin FR, Pieri MC, Manfredini M, Zamboni L, Somaini L, et al. Co-occurring attention deficit hyperactivity disorder symptoms in adults affected by heroin dependence: Patients characteristics and treatment needs. *Psychiatry Res* 2017;250:210-6.
12. Pani PP, Maremmanni I, Trogu E, Gessa GL, Ruiz P, Akiskal HS. Delineating the psychic structure of substance abuse and addictions: Should anxiety, mood and impulse-control dysregulation be included? *J Affect Disord* 2010;122:185-97.
13. Gupta S, Bhatia G, Sarkar S, Chatterjee B, Balhara YP, Dhawan A. Adult attention-deficit hyperactivity disorders and its correlates in patients with opioid dependence: An exploratory study. *Indian J Psychiatry* 2020;62:501-8.
14. Van Emmerik-van Oortmerssen K, van de Glind G, Koeter MW, Allsop S, Auriacombe M, Barta C, et al.