

Gender differences and impulsivity among ADHD in alcohol and cocaine use disorder patients

**17^e Congrès International
d'Addictologie de l'ALBATROS**
17th ALBATROS International Congress of Addictology



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Conflicts of Interest

Dr Carlos Roncero has received fees to give lectures for Janssen-Cilag, Indivior, Gilead, MSD, Exceltis, Abbvie, Takeda, Rubio, Casein-Recordati, Carnot and Angellini.

He has received financial compensation for his participation as consultant or a board member of Lundbeck, Gilead, MSD, INDIVIOR, Exceltis, Camurus, Abbvie , Idorsia, Rovi and Recordati board.

He has carried out the PROTEUS project, which was funded by a grant from Indivior and the COSTEDOPIA project, which was funded by INDIVIOR. He received two medical education grants by Gilead and medical writing support from Abbvie.

FUNDING

-Gerencia Regional de Salud de Castilla y León

GRS 2075/A/2019: Caracterización clínica de la presencia de síntomas psicóticos y su relación con la gravedad de la adicción entre los pacientes que consultan por un trastorno por consumo de alcohol y de cocaína y los que consultan por un trastorno por consumo de alcohol.

GRS 2187/A/2020: Seguimiento a los 6 meses de la influencia de la presencia de síntomas psicóticos y su relación con la gravedad de la adicción entre los pacientes que consultan por un trastorno por consumo de alcohol y de cocaína y los que consultan por un trastorno por consumo de alcohol.

GRS 234/A/2021: Influencia de los síntomas psicóticos en las alteraciones neuropsicológicas en pacientes con trastorno por consumo de alcohol y cocaína.



-Plan Nacional Sobre Drogas (Spain)

PND 2022/50: Relevancia de los síntomas psicóticos en la aparición de conductas violentas en pacientes con trastorno por consumo de sustancias

PND 2022/008812 Estudio de características clínicas y sociodemográficas de pacientes suicidas con un trastorno por consumo de sustancias valorados en psiquiatría de urgencias del complejo asistencial universitario de Salamanca en etapa COVID



-Instituto de Salud Carlos III (Spain)

Red de Investigación en Atención Primaria de Adicciones (RIAPAd) RD21/009/0029

Financiado por la Unión Europea – NextGenerationEU, Mecanismo para la Recuperación y la Resiliencia (MRR)





The Psychiatry Department (PS), belongs to the Salamanca University Healthcare Complex (SUHC), which includes 45 medical departments and close to 1000 beds.

The PS contains two reference units for the whole Castilla y León region and assists 330.000 inhabitants. In addition to this population, there are roughly 30.000 university students coming from other Spanish provinces or from other countries living in the city without being censused, and who present a higher risk of mental illness, drug abuse and first psychotic episodes, given the possibility that, due to the state of alarm, they were not able to return to their homes.



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COCAINE- ALCOHOL & ADHD

- **PREVALENT?**
- **RELEVANT?**

COCAINE- ALCOHOL & ADHD

Int. J. Environ. Res. Public Health 2023, 20, 1275

4 of 11



Systematic Review

Prevalence of Attention Deficit Hyperactivity Disorder (ADHD) among Substance Use Disorder (SUD) Populations: Meta-Analysis

Henrik Rohner ^{*,†}, Nikolas Gaspar ^{*,†} , Alexandra Philipsen and Marcel Schulze

Author	Year	Sex (male)	Mean Age	Age SD	ADHD Prevalence	n	Substance	Country of Origin
Bassiony et al. [12]	2022	83.6%	31.28	7.24	31%	122	opioid	Egypt
Miovsky et al. [31]	2021	76.7%	28.1	6.11	50.6%	180	various	Czech Republic
Martinez-Luna et al. [32]	2021	80%	32.9	10	15.5%	1538	various	Spain
Sanchez-Garcia et al. [33]	2020	79.6%	36.91	11.87	35.75%	402	various	International
Regan et al. [16]	2020	71.1%	16.33	1.15	21.5%	394	various	U.S.A.
Rad et al. [34]	2020	60.58%	na	na	46%	104	various	Romania
Luderer et al. [35]	2020	72.02%	45.35	10.2	20.5%	415	alcohol	Germany
Icick et al. [36]	2020	74%	40	11	19%	1294	various	International
Reyes et al. [21]	2019	65.4%	41.9	11.7	7.7%	379	alcohol	International
Lohit et al. [37]	2019	100%	40.68	na	19%	100	alcohol	India
Kaye et al. [38]	2019	na	na	na	16.53%	1276	various	International
Kumar et al. [18]	2018	100%	32.06	7.22	62%	50	alcohol	India
Umar et al. [39]	2017	82.8%	26.31	6.53	21.5%	233	various	Nigeria
Fatseas et al. [40]	2016	66.4%	37.7	10.6	11.1%	217	various	France
Daigre et al. [41]	2015	78.3%	36.15	10.43	21.12%	355	alcohol	Spain
Daigre et al. [4]	2013	87%	33.28	7.4	25%	200	cocaine	Spain
Huntley et al. [42]	2012	76.5%	39	10.3	12.2%	226	various	United Kingdom
Dakwar et al. [43]	2012	na	na	na	25	102	cocaine	U.S.A.
Vergara-Moragues et al. [19]	2011	91%	34.84	7.4	14.5%	166	cocaine	Spain
De los cobos et al. [20]	2011	81%	32.2	7.3	20.5%	78	cocaine	Spain
Delavenne et al. [44]	2011	95.65%	na	na	21.7%	46	cocaine	France
Carpentier et al. [45]	2011	83.42%	40.59	6.84	25.9%	193	opioid	Netherlands
Daigre et al. [46]	2009	80%	36.15	10.43	20%	80	various	Spain
Adler et al. [47]	2009	na	na	na	7.5%	1064	various	U.S.A.
Arias et al. [17]	2008	51.9%	38.37	7.67	5.22%	1761	various	U.S.A.
Johann et al. [48]	2003	83%	43.1	8.77	21.3%	314	alcohol	Germany
Molina et al. [49]	2002	63%	16.75	1.22	30%	395	alcohol	U.S.A.
King et al. [22]	1999	46%	37	7.75	16.8%	125	opioid	U.S.A.
Clure et al. [50]	1999	75.59%	34.3	0.78	32%	136	various	U.S.A.
Levin et al. [51]	1998	82%	33.7	0.4	10%	281	cocaine	U.S.A.
Carroll et al. [52]	1993	69%	27.7	6.06	34.6%	298	cocaine	U.S.A.

We estimate the prevalence of ADHD among SUD patients at 21%.

COCAINE- ALCOHOL & ADHD

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DOI: 10.1111/j.1521-0391.2013.12047.x

Attention Deficit Hyperactivity Disorder in Cocaine-Dependent Adults: A Psychiatric Comorbidity Analysis

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Nieves Martínez-Luna, MD,^{1,2} Gemma Prat, PhD,³ Sergi Valero, PhD,¹
Rosa Tejedor, MS,³ Josep A. Ramos-Quiroga, PhD,¹ Miguel Casas, PhD¹

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³Divisió Salut Mental, Althaia, Xarxa assistencial de Manresa, Manresa, Spain

25%

Article

Psychiatric Comorbidity in Treatment-Seeking Alcohol Dependence Patients With and Without ADHD

Journal of Attention Disorders
1–8
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Carlos Roncero^{1,2,3,4}, Lluïsa Ortega^{5,6}, Jesús Pérez-Pazos^{1,2}, Anna Lligoña^{5,6},
Alfonso C. Abad^{1,2}, Antoni Gual^{5,6}, Marta Sorribes^{1,2}, Lara Grau-López^{1,2,4},
Miquel Casas^{1,3,4}, and Constanza Daigre^{1,2,4}

16,2%

J Atten Disord . 2019;23(12):1497-1504 doi:10.1177/1087054715598841

COCAINE- ALCOHOL & ADHD

PREVALENCE

n= 188 Alcohol (GA) n=136 & Alcohol and Cocaine (GAC) =47

ADHD

- ASRS

GA=9,9 (6,316) GAC=11,8 (5,156) T student (159) = -1,285, p=,201

- CAADID (Interview ADHD)- CHILD

GA= 17,9% GAC=23,3% Chi cuadrado = ,401, p=,527

- CAADID (Interview CRITERIA ADHD)- ADULT

GA= 15,4% GAC=30,0% Chi cuadrado = 2,955, p=,086

COCAINE- ALCOHOL & ADHD

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COCAINE- ALCOHOL & ADHD

- **PREVALENT?**
- **RELEVANT?**

COCAINE- ALCOHOL & ADHD

JOURNAL OF PSYCHOACTIVE DRUGS
<https://doi.org/10.1080/02791072.2022.2151951>



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Cocaine Effect Expectancies among Patients with Cocaine Use Disorder with and without Adult Attention Deficit Hyperactivity Disorder: Are There Any Relevant Differences?

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ABSTRACT

Cocaine use could be modulated by drug expectancies based on previously experienced subjective effects. Some patients perceive a paradoxical calming effect after cocaine use. This study was performed to explore cocaine effect expectancies in patients diagnosed with cocaine use disorder, with and without co-occurring adult attention deficit hyperactivity disorder (ADHD). Secondly, we sought to empirically determine the presence of this paradoxical calming effect after cocaine use in patients with co-occurring adult ADHD to identify the individuals most at risk of cocaine use and relapse. Cross-sectional study using a consecutive sampling method of patients diagnosed with cocaine use disorder ($n = 221$) treated at public therapeutic communities in Andalusia (Spain). Participants completed a battery of instruments to assess the following variables: cocaine effect expectancies, paradoxical calming effect, adult ADHD, and other co-occurring psychiatric disorders. A multivariate binary logistic regression analysis showed that two variables, the paradoxical calming effect and antisocial personality disorder (ASPD), were independently associated with the probability of being diagnosed with adult ADHD (OR = 3.43, 95% CI = 1.88–6.26 and OR = 3.42, 95% CI = 1.30–8.95, respectively). The presence of a paradoxical calming reaction to cocaine and/or a diagnosis of ASPD in patients with cocaine use disorder increases the diagnostic suspicion of co-occurring adult ADHD.

ARTICLE HISTORY

Received 25 April 2022
Revised 05 September 2022
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KEYWORDS

Paradoxical calming effects;
cocaine; adult attention
deficit hyperactivity disorder;
antisocial personality
disorder; dual diagnosis

N=227

10.9% of patients reported experiencing an overall subjective perception that was classified as a “paradoxical effect,” while the other 89.1% showed the expected “psychostimulant effect.”

31 patients (14%) were diagnosed with co- occurring adult ADHD

The presence of a paradoxical calming reaction to cocaine and/or a diagnosis of ASPD in patients with cocaine use disorder increases the diagnostic suspicion of cooccurring adult ADHD.

COCAINE- ALCOHOL & ADHD

PSYCHOSIS

A lifetime diagnosis of **ADHD** was associated with the categorical presence of CIP

-($p = 0.007$) (Tang et al., 2007)

-($p = 0.002$) (Roncero et al., 2013)

A lifetime diagnosis of ADHD was associated with Stimulant-Associated Psychosis

-($p = < 0.01$) (Gilder et al., 2014)

CIP-no CITSH group almost double the prevalence of **ADHD** in adulthood (Roncero et al, 2017).

Vulnerability to SIP represented by childhood ADHD was suggested by Salo et al. (2008).

ADHD-relevant childhood behaviors may interact with MA exposure to reflect a neurobiological vulnerability related to the emergence of frequent MA-induced psychotic symptoms (Salo et al, 2013).

COCAINE- ALCOHOL & ADHD

ADHD has been associated with the presence of psychotic symptoms.

This seems to increase the risk of presenting an induced psychotic disorder in consumers, suggesting a common base for said phenomenon.⁴⁷

Cases of presence of psychotic symptoms and cocaine consumer patients and with ADHD who receive disulfiram have been described, a dose-response relation being hypothesized.⁵⁶

All this suggests the importance of detecting this comorbidity in cocaine consumers, in which it has been postulated that the Barkley scale is useful in discrimination of symptoms suggestive of ADHD.⁵⁷

COCAINE- ALCOHOL & ADHD

2023 update

n= 188 (SALAMANCA)

Group alcohol (GA) n=136 and Group alcohol y cocaine (GAC) =47

- **Age: GA= 49,66 (11,21) GAC=43,61 (9,45), p=,002**
- **Pschotic symptoms**
- **GA=20,0% GAC=55,9% p=0,000**

COCAINE & CIP

PREVALENCE: BACKGROUND

- Manschreck and cols. (1988) reported **29%** of 106 cocaine-disordered patients hospitalized.
- Brady and cols. (1991) found that cocaine-induced paranoia was present in **53%** of 55 cocaine-dependent subjects.
- Bartlett and cols. (1997) observed CIP in **47.5%** of 40 cocaine-dependent patients.
- Mooney and cols. (2006) found CIP in **67%** of 44 subjects who smoked cocaine in controlled laboratory conditions.
- Kalayasiri and cols. (2006) observed CIP in **65%** of 420 cocaine-dependents.

COCAINE & CIP

PREVALENCE: BACKGROUND

- Tang and cols. (2007) described CIP in **75%** of 243 adult cocaine-dependents.
- Roncero et al. (2013) reported psychotic symptoms in **53.8%** of 173 cocaine-dependent patients.
- Vergara-Moragues et al. (2012) reported CIPD in **11.5%** of 227 cocaine-dependent patients undergoing CT (2012), as well as **84.2%** of 114 cocaine-dependent patient seeking treatment in outpatient drug clinic showed at least one CIPS (2014).
- Vorspan (2012) described CIP in **86.5%** of 105 adult cocaine-dependents.
- Gilder et al (2014) reported stimulants-associated psychosis in 29% of 286 stimulants-dependent (only cocaine users 10.6%), and 16.6% of stimulants users
- Roncero et al. reported psychotic symptoms in **59.9%** of 287 cocaine-dependent patients (2013) in **67.9%** of 150 (2014) and in **55%** of 767 (2017) patients

COCAINE- ALCOHOL & ADHD

- **IMPULSITY**
- **GENDER**

COCAINE- ALCOHOL & IMPULSIVITY

PSICOPATOLOGIA

n= 188 Alcohol Group(GA) n=136 and Alcohol & cocaine Grupo(GAC) =47

Personality

- Any personality disorders (GA=78, GAC=27)

GA= 53,8% GAC= 77,8% Chi cuadrado = 4,786, p=,029

- TP/patient

GA=1,01 (1,343) GAC=2,29 (1,937) T student (35,045) = -3,187, p=,003

Impulsivity

- Impulsivity scale ZKPQ

GA=8,32 (3,971) **GAC=10,14 (4,033)** T student (162) = -2,567, p=,011

- BIS II

GA=67,12 (12,367) **GAC=73,74 (10,319)** T student (161) = -3,142, p=,002

COCAINE- ALCOHOL & ADHD

Impulsivity plays an important role in alcohol and cocaine use.

It has been described that there is a high relationship impulsivity and ADHD and as well between ADHD and the severity of drug use.

However, gender differences have not been well established.

Roncero C, Daigre C, Grau-López L, Rodríguez-Cintas L, Barral C, Pérez-Pazos J, Gonzalvo B, Corominas M, Casas M. Cocaine-induced psychosis and impulsivity in cocaine-dependent patients. J Addict Dis. 2013;32(3):263-73. doi: 10.1080/10550887.2013.824330.

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> *Subst Use Misuse.* 2023;58(8):1014-1020. doi: 10.1080/10826084.2023.2201851. Epub 2023 Apr 20.

Impulsivity and Treatment Outcomes in Individuals with Cocaine Use Disorder: Examining the Gap between Interest and Adherence

R Luba ¹, K M Carpenter ¹, S M Evans ¹, J Slonim ¹, R W Foltin ¹

Affiliations + expand

PMID: 37078221 DOI: 10.1080/10826084.2023.2201851

Greater impulsivity in individuals with CUD was associated with expressing an interest in treatment, but not treatment adherence or response.

COCAINE- ALCOHOL & ADHD

Impulsivity plays an important role in alcohol and cocaine use.

Translational Psychiatry

www.nature.com/tp




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2021, VOL. 17, NO. 3, 193–206
<https://doi.org/10.1080/15504263.2021.1944711>

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ARTICLE OPEN

 Check for updates

Shared genetic liability for alcohol consumption, alcohol problems, and suicide attempt: Evaluating the role of impulsivity

Mallory Stephenson ^{1,2}, Séverine Lannoy ¹ and Alexis C. Edwards ¹

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Impulsive Personality Traits Mediate the Relationship Between Attention-Deficit/Hyperactivity Disorder Symptoms and Psychiatric Comorbidity among Patients with Severe Alcohol Use Disorder

Laura Brandt, PhD^{a,b} , Frances R. Levin, MD^{a,b}, and Dominik Kraigher, MD^c

^aDivision on Substance Use Disorders, New York State Psychiatric Institute, New York, New York, USA; ^bDepartment of Psychiatry, Columbia University Irving Medical Center, New York, New York, USA; ^cAnton Proksch Institut, Vienna, Austria

 OPEN ACCESS  Check for updates

Our findings provide preliminary evidence that features of impulsivity may serve as early indicators of genetic risk for alcohol problems and **suicidality**.

The subcomponents of impulsivity to react rashly when experiencing negative emotions and the tendency to not persist in activities seem to contribute to the relationship between ADHD symptoms (particularly those in childhood) and **psychiatric comorbidity** among patients with severe AUD

COCAINE- ALCOHOL & ADHD

- **IMPULSITY**
- **GENDER**

COCAINE- ALCOHOL & ADHD

However, gender differences have not been well established.

Is gender relevant?



BRIEF RESEARCH REPORT
published: 31 May 2019
doi: 10.3389/fpsyg.2019.00343



Mood Disorders and Severity of Addiction in Alcohol-Dependent Patients Could Be Mediated by Sex Differences

Raul F. Palma-Álvarez^{1,2}, Laia Rodriguez-Cintas^{1,2}, Alfonso C. Abad¹, Marta Sorribes¹, Elena Ros-Cucurull^{1,2}, María Robles-Martínez³, Lara Grau-López^{1,2}, Lourdes Aguilar⁴ and Carlos Roncero^{4*}

¹Addiction and Dual Diagnosis Unit, Department of Psychiatry, Vall d'Hebron University Hospital-Public Health Agency, Barcelona (ASPB), CIBERSAM, Barcelona, Spain, ²Department of Psychiatry and Legal Medicine, Universitat Autònoma de Barcelona, Barcelona, Spain, ³Institut de Neuropsiquiatria i Addiccions, Hospital del Mar, Barcelona, Spain, ⁴Psychiatry Service, Salamanca University Health Care Complex, Instituto de Biomedicina, University of Salamanca, Salamanca, Spain

OPEN ACCESS

Edited by:



Pacini Editore & AU CNS

Regular article

Heroin Addict Relat Clin Probl 2014; 16(3): 65-74

HEROIN ADDICTION &
RELATED CLINICAL
PROBLEMS

www.europad.org
www.wftod.org

Gender differences in severity of addiction in opiate-dependent outpatients

Marcela Mezzatesta-Gava², Carlos Roncero^{1,2}, Laia Rodriguez-Cintas^{1,2}, Gideoni Fuste^{1,2,3}, Carmen Barral^{1,2}, Nieves Martínez-Luna^{1,2}, Miquel Casas^{1,2}, and Laia Miquel^{1,2,4}

¹ Outpatients drug clinic (CAS) Vall d'Hebron, Hospital Universitari Vall d'Hebron, Agència de Salut Pública de Barcelona (ASPB), Spain, EU

² Department of Psychiatry, Hospital Universitari Vall d'Hebron, CIBERSAM, Universitat Autònoma de Barcelona, Spain, EU

³ Private Practice, A Coruña, Spain, EU

⁴ Network Group for Research in Woman Mental Health (GTRD).

COCAINE- ALCOHOL & ADHD

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Is gender relevant?

Roncero et al. *Reproductive Health* (2020) 17:25
<https://doi.org/10.1186/s12978-020-0880-9>

Reproductive Health

REVIEW

Open Access

Cannabis use during pregnancy and its relationship with fetal developmental outcomes and psychiatric disorders. A systematic review



Carlos Roncero^{1,2*}, Isabel Valriberas-Herrero^{1,2}, Marcela Mezzatesta-Gava³, José L. Villegas^{1,2},
Lourdes Aguilar^{1,2} and Lara Grau-López^{4,5,6}

The use of cannabis among pregnant women is frequent but it has not been extensively researched.

Prenatal exposure to cannabis may be associated with affective symptoms and ADHD.



COCAINE- ALCOHOL & ADHD

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COCAINE- ALCOHOL & ADHD

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Is gender relevant? Yes

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Reproductive Health

REVIEW

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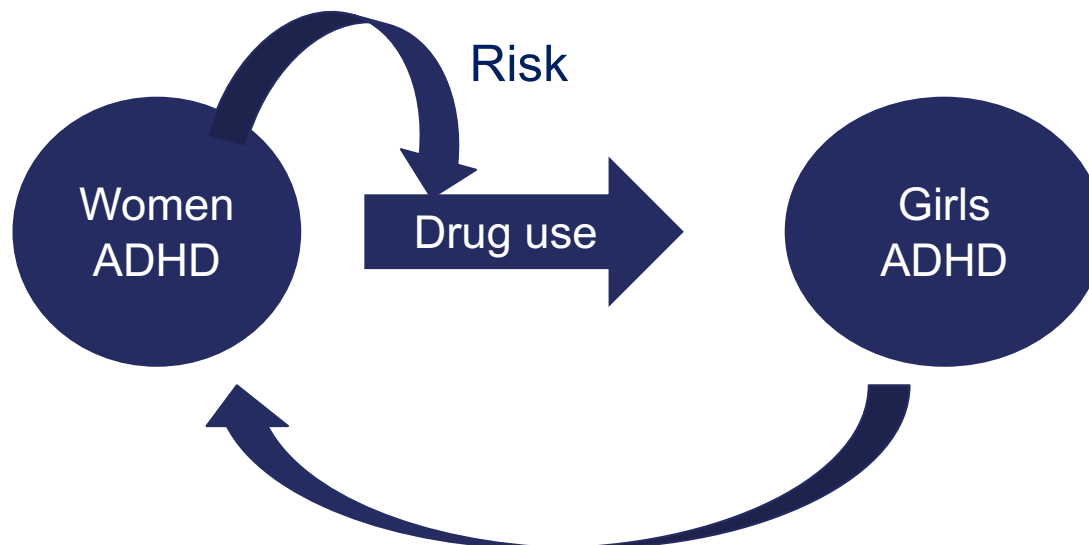
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COCAINE- ALCOHOL & ADHD

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Is gender relevant? Yes.... for ADHD patients a lot

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Reproductive Health

REVIEW

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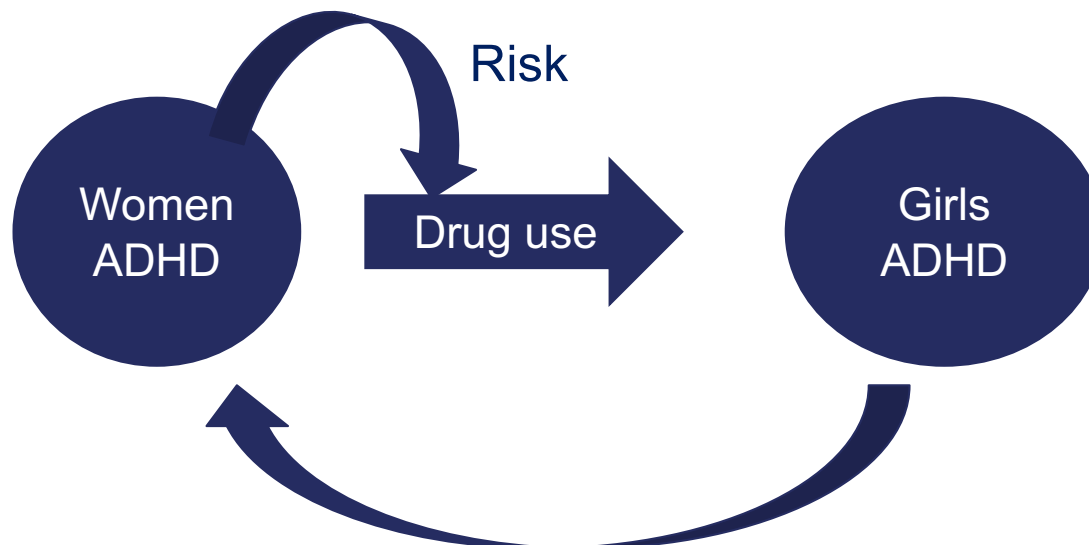
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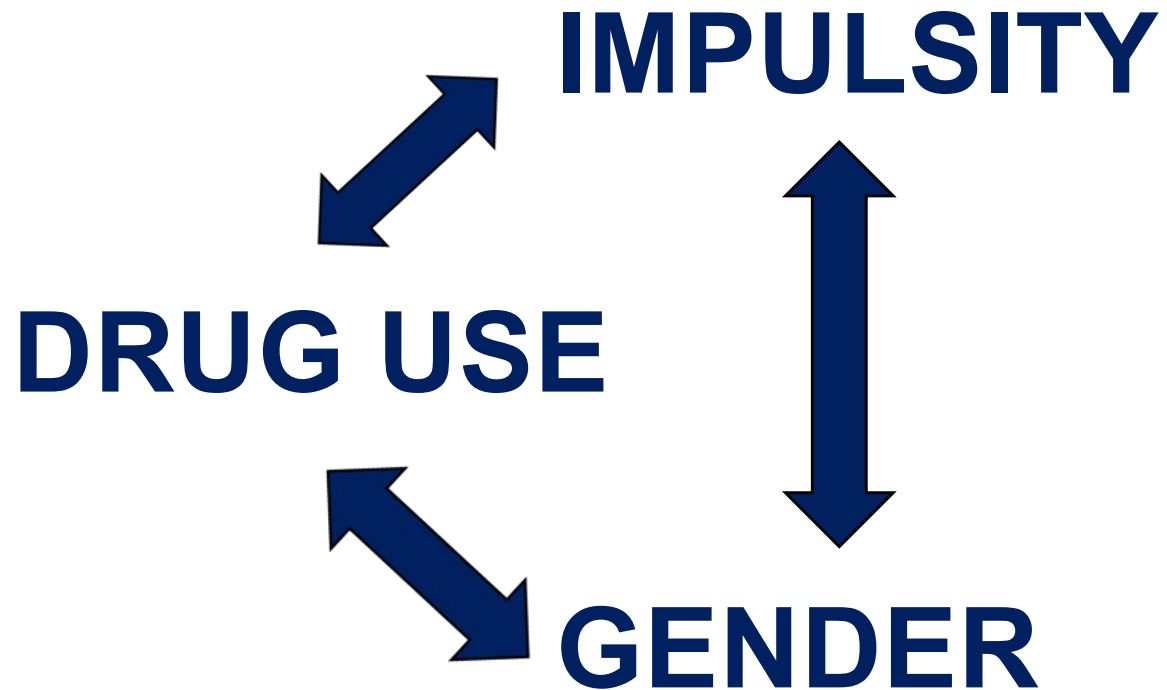
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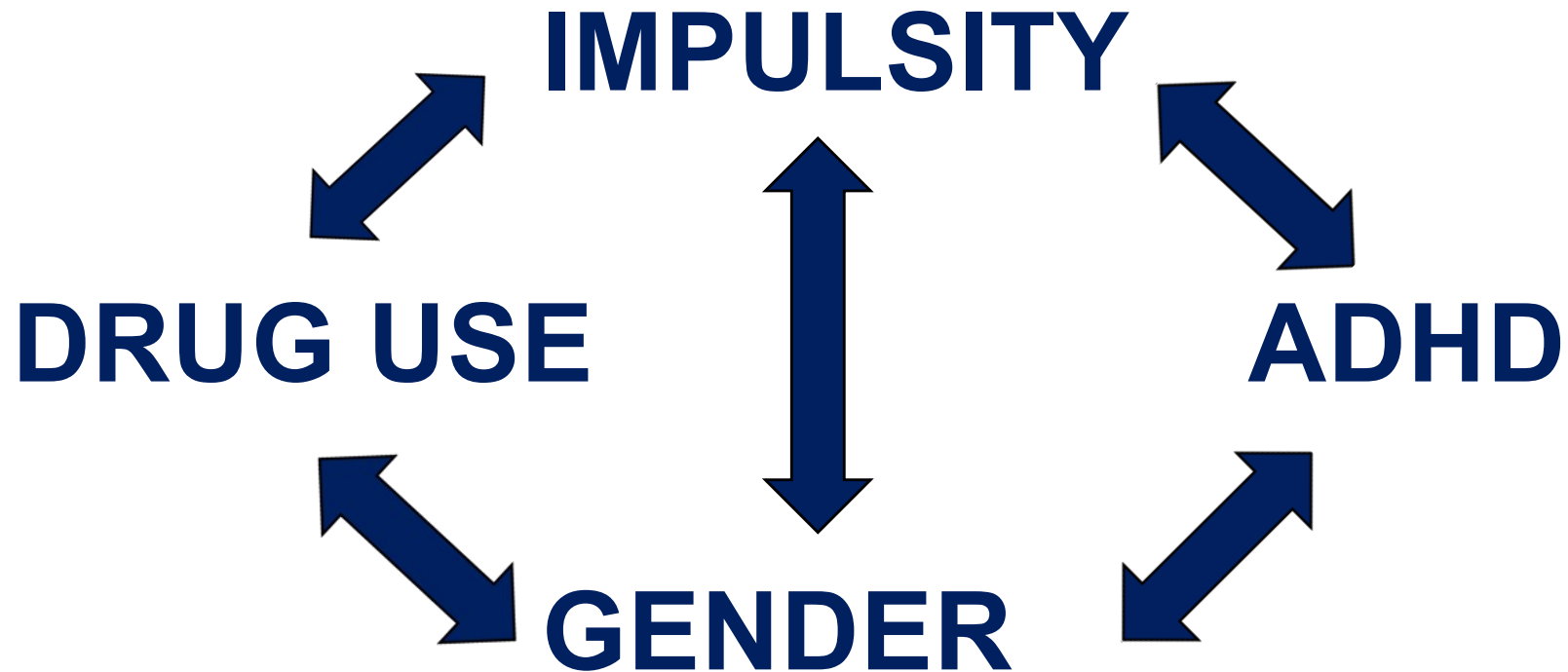
Prenatal exposure to cannabis may be associated with affective symptoms and ADHD.




COCAINE- ALCOHOL & ADHD



COCAINE- ALCOHOL & ADHD



COCAINE- ALCOHOL & ADHD



impulsivity AND gender AND ADHD AND cocaine

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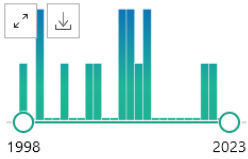
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Cocaine use in university students: relationships with demographics, mental health, risky sexual practices, and trait impulsivity.

Cite Chamberlain SR, Lust K, Grant JE.

CNS Spectr. 2021 Oct;26(5):501-508. doi: 10.1017/S1092852920001492. Epub 2020 Jun 30.

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Cocaine use was associated with more years as a student, lower grade point averages, more use of other drugs, riskier sexual practices, post-traumatic stress disorder, attention deficit hyperactivity disorder, treatment for psychological/ ...

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Comorbid substance use disorders with other Axis I and II mental disorders among treatment-seeking Asian Americans, Native Hawaiians/Pacific Islanders, and mixed-race people.

Cite Wu LT, Blazer DG, Gersing KR, Burchett B, Swartz MS, Mannelli P; NIDA AAPI Workgroup.


J Psychiatr Res. 2013 Dec;47(12):1940-8. doi: 10.1016/j.jpsychires.2013.08.022. Epub 2013 Sep 9.

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Mood (60%), anxiety (31.2%), adjustment (30.9%), and disruptive (attention deficit-hyperactivity, conduct, oppositional defiant, disruptive behavior diagnosis, 22.7%) diagnoses were more common than others (psychotic 14.2%, personality 13.3%, other chi ...

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COCAINE- ALCOHOL & ADHD



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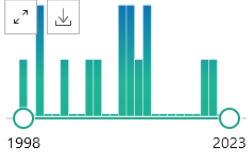
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Mood (60%), anxiety (31.2%), adjustment (30.9%), and disruptive (attention deficit hyperactivity disorder, oppositional defiant disorder, conduct disorder, and disruptive behavior disorder) diagnoses were present in 14.2%, 14.2%, 13.3%, and 13.3% of the sample, respectively.

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Adult ADHD Diagnosis, Symptoms of Impulsivity, and Emotional Dysregulation in a Clinical Sample of Outpatients Consulting for a Behavioral Addiction.

Cite El Archi S, Barrault S, Garcia M, Branger S, Maugé D, Ballon N, Brunault P.

Share J Atten Disord. 2023 May;27(7):731-742. doi: 10.1177/10870547231161336. Epub 2023 Mar 21. PMID: 36945199

METHOD: Sixty-five outpatients consulting for a behavioral addiction were assessed for ADHD (DIVA-5), addictive disorder (alcohol, tobacco, cannabis, gambling, gaming, food, and sex), impulsivity (UPPS-P), and emotion dysregulation (DERS-36). RESULTS: ...

2

Adolescent ADHD and electrophysiological reward responsiveness: A machine learning approach to evaluate classification accuracy and prognosis.


Cite Hámori G, File B, Fiáth R, Pászthy B, Réthelyi JM, Ulbert I, Bunford N.

Share Psychiatry Res. 2023 May;323:115139. doi: 10.1016/j.psychres.2023.115139. Epub 2023 Mar 4. PMID: 36921508 [Free article.](#)

We evaluated event-related potential (ERP) indices of reinforcement sensitivity as ADHD biomarkers by examining, in N=306 adolescents (M(age)=15.78, SD=1.08), the extent to which ERP amplitude and latency variables measuring reward anticipation and response (1) differentiated ...

Prevalence and Clinical Significance of Psychiatric Comorbidities With Gambling

COCAINE- ALCOHOL & ADHD



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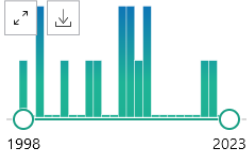
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PMID: 32600502 [Free PMC article.](#)

Cocaine use was associated with more years as a student, lower grade point average, and higher rates of substance use, including alcohol, marijuana, and other drugs, riskier sexual practices, and treatment for mental health issues.

2

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Comorbidity of ADHD and substance use among treatment-seeking adolescents and young adults.

Wu LT, Blazer D, et al.
J Psychiatr Res. 2023 Mar 1;271:1-10. doi: 10.1016/j.jpsychres.2023.115139. Epub 2023 Mar 4.
PMID: 36945199

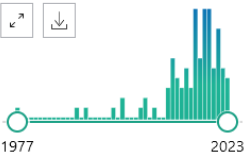
ADHD (DIVA-5), cannabis, gambling, gaming, food, and **sex**), **impulsivity** (UPPS-P), and **physiological reward responsiveness: A machine classification accuracy and prognosis.**

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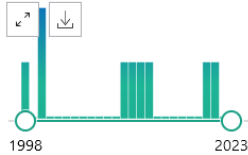
ADHD (DIVA-5), cannabis, gambling, gaming, food, and **sex**), **impulsivity** (UPPS-P), and **physiological reward responsiveness: A machine classification accuracy and prognosis.**

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Chamberlain SR, Lust K, Grant JE.
CNS Spectr. 2021 Oct;26(5):501-508. doi: 10.1017/S1092852920001492. Epub 2020 Jun 30.
PMID: 32600502 [Free PMC article.](#)

METHODS: Approximately 10 000 university students were invited to take part in an online survey, which assessed the use of **cocaine** (ever or past year), **alcohol** and drug use, mental health issues, and **impulsive** and compulsive tendencies. ...**Cocaine** use ...

2

Cite

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Impulsivity in adult ADHD patients with and without cocaine dependence.

Crunelle CL, Veltman DJ, van Emmerik-van Oortmerssen K, Booij J, van den Brink W.
Drug Alcohol Depend. 2013 Apr 1;129(1-2):18-24. doi: 10.1016/j.drugalcdep.2012.09.006. Epub 2012 Sep 29.
PMID: 23026814 [Free article.](#)

COCAINE- ALCOHOL & ADHD

The relationship between impulsivity, ADHD (attention deficit hyperactivity disorder) and alcohol and cocaine use disorder is analyzed.

132 patients (92 men and 40 women) seeking treatment were evaluated.

99 with Alcohol Use Disorder (AUD)

33 with AUD and Cocaine Use Disorder (CUD)

Data were collected between January 2020 and January 2022.

Inclusion criteria were the following; patients must be 18 years or older, Alcohol Use Disorder (AUD) with or without Cocaine Use Disorder (CUD), provide signed informed consent, finish the test evaluation process.

Exclusion criteria were; having previous diagnoses of psychosis or bipolar disease, not having a fluent Spanish expression or comprehension. The study protocol was approved by the Hospital Committee.

Patients did not receive monetary compensation for their participation in the study

COCAINE- ALCOHOL & ADHD

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ASRS, Wender Utah (WURS)

Barrat impulsivity Scale (BIS-11)

Zuckerman-Kuhlman Personality Questionary ZKPQ

Depression inventory (BDI)

State-Trait Anxiety Inventory (STAI- R/S)

Visual Analogue Scale (EVA)

COCAINE- ALCOHOL & ADHD

Gender	132	Men		Women	
		92	69,69 %	40	30,30 %
	Mean (S.d)	Men Mean (S.d)		Women Mean (S.d)	
Barrat Total	68,15 (13,42)	68,95 (12,83)		66,31 (14,71)	
Barrat Impulsivida d cognitiva	20,88 (8,30)	20,10 (3,70)		22,72 (14,01)	
Barrat Impulsivida d motora	21,94 (5,30)	21,88 (5,38)		22,08 (5,17)	
Barrat Impulsivida d no planeada	27,16 (5,43)	27,46 (5,16)		26,46 (6,02)	
ASRS	10,30 (6,36)	10,27 (6,93)		10,37 (4,82)	
ZKPQ ACTIVIDAD general	8,97 (3,51)	9,09 (3,63)		8,7 (3,26)	
ZKPQ Esfuerzo por trabajo	3,72 (1,79)	3,92 (1,82)		3,25 (1,66)	
ZKPQ Sociabilida d	6,11 (3,64)	6,15 (3,90)		6,00 (3,01)	
ZKPQ Intolerancia					
Aislamiento	3,41 (2,31)	3,36 (2,37)		3,52 (2,18)	
ZKPQ Impulsivida d General	8,70 (3,96)	8,95 (4,28)		8,13 (3,09)	
ZKPQ Impulsivida d especifica	3,80 (1,83)	3,77 (1,93)		3,85 (1,59)	
ZKPQ Agresivida d- Hostilidad	7,49 (3,28)	7,25 (3,25)		8,05 (3,33)	
Escala Valoración Analógica Cocaína	,65 (2,03)	,886 (2,37)		0,103 (0,50)	
Escala Valoración Analógica	2,63 (3,27)	2,63 (3,22)		2,64 (3,44)	

COCAINE- ALCOHOL & ADHD

AUD Vs AUD +CUD : impulsivity

Differences in

- Total impulsivity (BIS) ($T(128)=-2,737$ $p=0,007$)
AUD +CUD Mean=73,55, Sd=11,72) AUD (Mean=66,32, Sd=13,52).
- No planned impulsivity ($T(128)=-2,046$, $p=0,018$)
AUD +CUD (Mean=29,09, Sd=5,77) AUD(Mean=26,51, Sd=5,17).

No gender differences :

Total impulsivity men (Mean=68,95, Sd=12,83) vs women (Mean=66,31, Sd=14,71) ($t(128)=0,972$ $p=0,335$).
Neither the subscales.

COCAINE- ALCOHOL & ADHD

Impulsivity

Men

Women



COCAINE- ALCOHOL & ADHD

ADHD

No differences according ASRS men vs women ($t(126)=-0,082$, $p=0,934$)

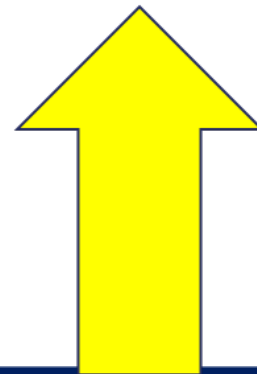
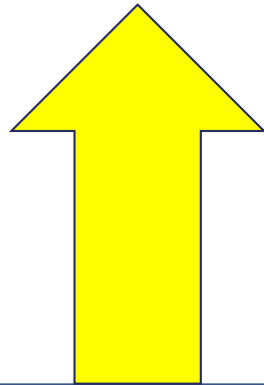
No differences according ASRS between AUD+ CUD vs AUD ($t(126)= -0,291$, $p=0,771$).

COCAINE- ALCOHOL & ADHD

ADHD

Men

Women



COCAINE- ALCOHOL & ADHD

Correlación ASRS con...	R(Correlación Pearson)	P(Significación unilateral)
<i>Barrat: Total</i>	,114	,196
<i>Barrat: Impulsividad cognitiva</i>	,209	,018*
<i>Barrat: Impulsividad motora</i>	,327	,000*
<i>Barrat: Impulsividad no planeada</i>	,275	,002*

Correlación parcial ASRS con variable género...	R _{1,2} (Correlación parcial)	P(Significación unilateral)
<i>Barrat: Total</i>	,116	,194
<i>Barrat: Impulsividad cognitiva</i>	,211	,017*
<i>Barrat: Impulsividad motora</i>	,327	,000*
<i>Barrat: Impulsividad no planeada</i>	,277	,002*

COCAINE- ALCOHOL & ADHD

Correlación
por ASRS
separando
los grupos...

	HOMBRES		MUJERES	
	R (Correlación Pearson)	P (Significación unilateral)	R (Correlación Pearson)	P (Significación unilateral)
<i>Barrat: Total</i>	-,001	,994	,477	,002*
<i>Barrat: Impulsividad cognitiva</i>	,310	,003*	,274	,096
<i>Barrat: Impulsividad motora</i>	,283	,007*	,501	,001*
<i>Barrat: Impulsividad no planeada</i>	,166	,117	,629	,000*

COCAINE- ALCOHOL & ADHD

There is a correlation between the ASRS score for ADHD and the score on the Barrat impulsivity subscales but not on the total score (see table).

The **ASRS score explains 9.3% of the impulsivity variance.**

By eliminating the effect of gender or substance consumed (partial correlation) we obtain practically equal correlations between ADHD screening and the different impulsivity factors.

If we analyze the groups separately, we find that the ASRS has greater explanatory power for the group of **women**; ADHD screening explains **22.75% of total Impulsivity, 25.10% of Cognitive Impulsivity, and 39.56% of Unplanned Impulsivity.**

In men, the ASRS score would explain **9.6% of cognitive impulsivity and 8% of motor impulsivity**

COCAINE- ALCOHOL & ADHD

Impulsivity

Men

Women



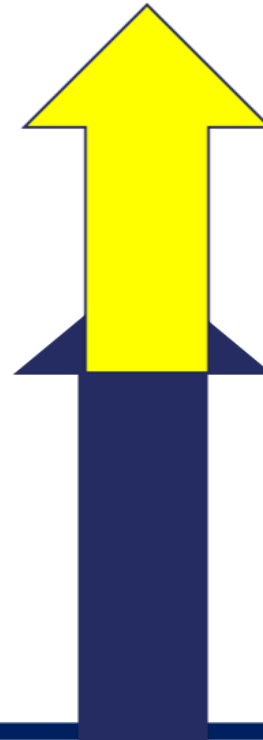
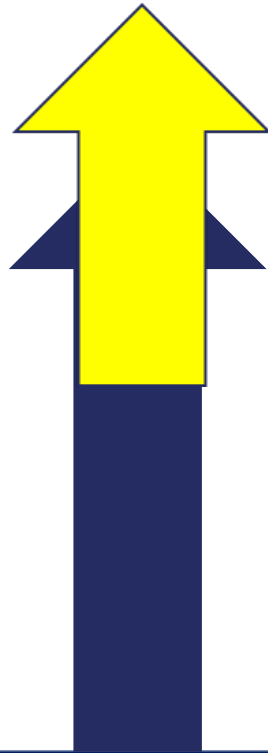
COCAINE- ALCOHOL & ADHD

Impulsivity

Men

Women

in ADHD



COCAINE- ALCOHOL & ADHD

Relation Barrat total								
with...	Men	r	p	R ²	Women	r	P	R ²
ZKPQ NEUROTICISM		,273	,009 *	,07 4		,45 5	,004 *	,20 7
ZKPQ ACTIVIDATY		- ,172	,102	,02 9		- ,43 0	,006 *	,18 4
ZKPQ work effots		- ,270	,010	,07 2		- ,46 4	,003 *	,21 5
ZKPQ SOCIABILITY		- ,255	,015 *	,06 5		- ,14 4	,381	,02 0
ZKPQ intolerance isolitaion		- ,307	,003 *	,09 4		- ,12 2	,460	,01 4
ZKPQ IMPULSIVITY		,336	,001 *	,11 2		,30 8	,056	,09 4
ZKPQ AGRESSION- HOSTILITY		,370	,000 *	,13 6		,34 4	,032 *	,11 8
Stai-State		,423	,000 *	,17 8		,48 5	,002 *	,23 5
Stai-Trait		,513	,000 *	,26 3		,46 0	,003 *	,21 1
Eva: COCAINE		,267	,011 *	,07 1		- ,13 6	,409	,01 8
Eva: ALCOHOL		,299	,004 *	,08 9		,23 0	,159	,05 2
BDI		,450	,000 *	,20 2		,39 3	,019 *	,15 4

COCAINE- ALCOHOL & ADHD

Women show an inverse relationship between levels of Impulsiveness and activity and work effort.

Men, however, present a negative relationship between Impulsivity and sociability and intolerance to isolation and a positive relationship between impulsivity and Impulsivity measured with ZKPQ and the craving for consuming alcohol and cocaine.

Both men and women:

We find that the levels of Impulsivity are positively correlated with anxiety evaluated with ZKPQ and with STAI (state and trait) and with depression evaluated with BDI.

There is also a relationship between the levels of aggressiveness and those of Impulsivity for both groups.

COCAINE- ALCOHOL & ADHD

COCAINE- ALCOHOL & ADHD

COCAINE- ALCOHOL & ADHD

Total Impulsivity were higher in the AUD+ CUD, as well as the unplanned impulsivity subscale.

ADHD levels had explanatory power for impulsivity (Barrat) in women, also having an inverse relationship for activity and work effort measured with ZKPQ in this group.

In men, there is a positive relationship between ADHD and average impulsivity with ZKPQ and the craving for consuming alcohol and cocaine.

However, they have lower levels of tolerance for isolation and sociability.

So, gender differences are relevant in the clinical approach of dual ADHD patients and could be considered for the treatment management.

CONCLUSIONS

- ADHD is very prevalent in AUD and AUD+CUD patients
- There is higher impulsivity among AUD+ CUD than AUD
- Gender differences are relevant in the clinical approach of dual ADHD patients and could be considered for the treatment management.
- Are ADHD more relevant in women?

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