

ADVERSE CHILDHOOD EXPERIENCES ARE ASSOCIATED WITH HISTORY OF OVERDOSE AMONG PATIENTS IN OUTPATIENT ADDICTION CARE

Introduction

- Those with a history of adverse childhood experiences (ACEs) have an increased risk of mental health issues and substance use.^{1,3,4}
- Having a substance use disorder (SUD) increases the risk of overdose (OD).²
- There has been little investigation regarding ACEs and risk of OD.
- This study examined the relationship between ACE scores and a self-reported history of OD among patients engaging in an addiction and mental health outpatient setting.

Methods

Subjects: This single-center cross-sectional design included adult patients ages 18-74 participating in a dual-diagnosis addiction and mental health outpatient recovery and treatment program from November 2017 to March 2020.

Measures: Patients (n= 115) were assessed with selfreport questionnaires at their first visit to an outpatient addiction clinic in Southern California. The baseline questionnaire included questions related to sociodemographic information, ACEs, selfreported problems with substance use (i.e., cannabis,



alcohol, stimulants, opioids, sedatives), and history of OD. The primary outcome was self-reported OD history (yes/no).

Analysis: Bivariate and multivariable logistic regression was used to determine whether ACE scores are associated with self-reported OD history.

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Results

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Table 1. Bivariate analysis of factors associated with having a reported overdose among patients in a Southern California addiction Table in Rivariate analysis of factors associated with having a reported overdose among patients in a Southern California addiction

	clinip from November 1, 2017 to March 13, 202	0 (n=115).	Total	History of	No History of	Odds Ratio	\mathbf{V}^2	D
-	Donomentana	Tatal	History of	NOwisidosof	Odtservatise	95% (CI)	Λ	I
_	All	Total	115 (MOC!OSe	<u>DV (212.6)</u>	89%(7¢! 4)			
• 1	All Male (n [%]; ref = female)	115 (100.0)	61299200	83(75090)	48 (53.9)	1.17 (0.49-2.81)	0.12	0.7239
	Male (ne al; intake (M SD]; range 18-74)	61 (53.0)	40.63(52.9)	44853.96.6	$1_{3}_{3}_{4}_{4}_{4}_{4}_{1}_{3}_{3}_{8}_{8}_{4}_{4}_{4}_{1}_{3}_{3}_{8}_{8}_{8}_{4}_{4}$	1.02(0.99-4.06)	2.46	0.1165
	Age at intake (M[SD]; range $18-74$) Age at intake (n 1% ; ref = 18-35)	40.6 ± 14.4	44.5 ± 16.6	39.4 ± 13.64	1.02 (0.99-1.06)	2.46 0.1165		
	Age at $18 - 35$ Age $18 - 35$ Age $18 - 35$		46(40.0)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	38(42.7)			
	18-35 0 50	46 (40.0)	53(46(1))	38 (42.77)	1242 1472 1217	1 247(0 45-2042)	0.87	0 3493
	60+60+	16(13.9)	16(71(36))	(17619)	3.69 (9.6501) 87)	3 60181 0608267)	0.07 4 48	0.0344
	White $(mea)(meb) = no)$	86 (74.8)	86184692	68(7604)	0.7660(276-1483)	0.774(0.0260083)	0.54	0.0344
	Hispanic $(n [\%], rep_n 0 f - n)$	20 (17.7)	207(203)	13(14.9)	2.10(0.74+598)	21.92(0.2001.00)	1 07	0.4000
	Married/significant other $(n_1)/(n_1)$	-57(49.6)	5710(385)	47(52.8)	0.56(9.23-136)	2.10(0.74-3.98)	1.92	0.1001
I	Completed college $(n [\%]; ref = no)$	$-\frac{100}{60}(52.2)$	57(49,0)	48(53,9)	0.73(0.31-1.76)	0.30(0.23-1.30) 0.49(0.24857)	1.05	0.2012
	Employed full/part time ($n \left[\frac{1}{2}\right]$, ref $= n_0$)	60 (53.6)	60 10 (38.5)	50 (58.0).1)	2.22 (0.91-5.46)	0.3.93(0.3104160)	0.49	0.485/
	Religious ($n [\%]$; ref = :	$no_{37}(33.9)$	60 (0 (38)5)	27(3285)	1.30(0.32-3.23)	$2.2.3_{1}(0.915-7786)$	3.03	0.0816
	Adverseligiüdiso(ad experiente score (M [SD])	2.7 ± 2.4	37 4.3 3±92).7	19(38.5)	1.3227.(62.59)	1.8.48(0.5200383)	0.31	0.5778
	Problectiversite child bood experience score (M [\$ [2]) 9)	2.73世(2145)	24.(23.6).7 ().42 (2) .3 2±1252)	1.369(1.00-93.59)	8.48	0.0036
	Probably with a write the can habite $(n [9\%]; ref = 1$	$no^{4}(73.7)$	24(20.9)	63(70.8)5)	2.172(0.62363)	0.427(0.12-19.35)	1.69	0.1934
_	Problems with stimulants (n $[1, 1]$, $[1, 1]$	34(29.6) = 32(22.0)	84(75,7)	2212(84.0)	2.61(3.03,0.48)	2.17(0.68-0.93)	1.70	0.1925
	Problems with opioids (n [%]; ref = no) Problems with stimulants (n [%]; ref =	$= n_{0} \frac{39}{101}$	34(23.6)	231281) 1321(46,2)	5.00(1.22-7.34) 1.224(24-7.1)	$2.61_{0}^{69}(1.03-6.48)$	4.28	0.0386
-	$\frac{1001001}{10010000000000000000000000000$	(19.1)	39(33.9)	14(53.9)	$\frac{25(28.1)}{25(28.1)}$	3.00(1.22-7.34)	5.69	0.0171
	Age range for overdose (18-74) age range for no	overdose (1 no)	9-73) * Makriea	significant othe	r'' 13'' = married	3.10 (12 4-8.41)	4.91	0.0267

significant other, in a relationship: *Married/significant other "no"* \doteq single, separated, divorced, widdwed. M = mean, SD = standaged angto for to vere to see in the state of the st totalsigneficantsumer, chumpelatelonship? Masing data gnificant other "no" = single, separated, divorced, widowed. M = mean, SD = standard deviation, CI = confidence interval, P = p-value. P-values are based on Chi-squared (X^2) tests of significance. Variable totals might not sum to column totals due to missing data.

Table 2. Multivariable logistic regression analysis of factors associated with having a reported overdose among patients in a Southern California addiction clinic from November 1, 2017 to March 13, 2020 (n= 115).

Parameter		В	SE (β)	Adjusted Odds Ratio (95% CI)	
	Age at intake (ref = $18-35$)				
T	18-35				
	35-59	0.40	0.57	1.41 (0.46-	-4.28)
60+ Adverse childhood experience score Problems with stimulants Problems with opioids Problems with sedatives		1.38	0.70	4.10 (1.00-	17.02)
		0.20	0.10	1.23 (1.00-	-1.50)
		0.73	0.56	2.07 (0.70-	-6.14)
		0.67	0.56	1.93 (0.65-	-5.76)
		0.21	0.66	1.27 (0.34-	4.77)
	B = unstandardized beta, SE = standard error	or, $\beta = \text{stan}$	dardized bet	a, CI = confide	ence interval,
	nuverse ennunoou experien		0.20	0.10	1.20 (1
	Problems with stimulants		0.73	0.56	2.07 (0
	Problems with opioids		0.67	0.56	1.93 (0
	Problems with sedatives		0.21	0.66	1.27 (0

Results



- ≤ 0.05).

Conclusion

Acknowledgements

References

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• Of the 115 participants, 53% were male, 75% reported White race, and 18% reported Hispanic/Latino ethnicity with a mean age of 40.6 (SD = 14.4, range 18-74).

• A past OD was reported by 26 (22.6%) at intake.

• The mean age was 44.5 (SD = 16.6) for those reporting a past OD and 39.4 (SD = 13.64) for those who did not report a past OD. • The mean ACE score was 4.0 (SD = 2.7) for those reporting a past OD and 2.3 (SD = 2.2) for those who did not report a past OD. • In the multivariable regression, older age and a higher ACE score were significantly associated with history of OD (AOR = 4.10, 95% CI: 1.00-17.02, p \leq 0.05; AOR = 1.23, 95% CI: 1.00-1.50, p

• Given the observed association between OD and higher ACE scores and older age, patients presenting for treatment in outpatient dualdiagnosis clinics should be screened for ACEs and OD history, providing the opportunity for this data to be incorporated into their clinical care and engagement in trauma informed care.

Prevention programs targeting at-risk youth can also utilize the ACE score to screen for highly-vulnerable populations who might be at risk for early initiation of substances and potential overdose.

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