

Article

## Adverse Childhood Experiences Propel Adult Addiction

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**Abstract:** Despite the negative consequences, individuals with addiction persist in drug use, characterized by relapses and chronic brain disorders. Research has established a link between adverse childhood experiences (ACEs) and subsequent alcohol and drug problems. This study aimed to identify the influence of ACEs on the development of addiction in adulthood. A descriptive (retrospective) design was employed from August 1, 2023, to March 1, 2024, involving 142 male addict patients using convenience sampling. Data were collected via a questionnaire comprising sociodemographic information, the ACEs Questionnaire, and the Simple Screening Instrument for Alcohol and Other Drugs (SSI-AOD). Descriptive and inferential statistics were used for analysis. Results showed that 43.3% of patients had experienced some form of negative childhood experience, and 71.8% had moderate to severe alcohol and drug use. The findings suggest that ACEs significantly impact the development of addiction in adulthood, with participants exhibiting moderate levels of both substance use and adverse childhood experiences. Ethical considerations were adhered to, with approval from the University of Kerbala and assurances of confidentiality for participants. This study highlights the critical role of ACEs in adult addiction, emphasizing the need for targeted interventions.

**Keywords:** Adverse Childhood Experiences, Addiction. Substance Abuse, Childhood Trauma, Retrospective Study.

### 1. Introduction

Addiction is a complex mental disorder associated with harmful and maladaptive actions affected on their families, and society as a whole, which impacts multiple brain areas, including those responsible for thinking, planning, problem-solving, and decision-making, and the limbic system, which affects positive and negative emotions and mood [1] and [2]. Alcohol and other prescription pharmaceuticals, including benzodiazepines, benzhexol, codeine, and various psychiatric medications, remain the most frequently consumed psychoactive substances in Iraq [3]. It is estimated that there are approximately 2 billion people around the world that drink alcohol. There are roughly 185 million people around the world who are involved in the use of illegal substances, as reported by the World Health Organization [4]. Adverse childhood experiences, also known as ACEs, cover a wide variety of forms of maltreatment, including physical, emotional, and sexual abuse, as well as neglect. In addition, they include difficulties that are associated with the household, such as being a witness to domestic violence, substance misuse, or mental illness situations [5]. Directly harmful events (such as abuse or neglect) and indirectly harmful events (such as exposure to parental separation, drug abuse, mental illness, domestic violence, or incarceration) are both included in the category of adverse childhood experiences [6] and [7] and [8]. Every step of the addiction cycle—from initial unpleasant emotional states to compulsive drug seeking and use—is affected by adverse childhood experiences [9]. Recent evidence showed that the prevalence of ACEs is increasing, ranging from 85.4% to 100% among drug users compared to 66.2%–75% among non-drug users.

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ACEs are associated with poly-substance use, substance use, and drug-use disorders [10]. Individuals may seek to self-medicate or alleviate mood symptoms linked to a dysregulated physiologic stress response after experiencing adverse childhood events, which may raise their likelihood of developing substance use disorders (SUDs) [11]. Increases in the intake of alcohol, prescription pharmaceuticals, and illegal narcotics may point to a rise in the prevalence of substance use disorders and the subsequent demand for treatment programmes.

## 2. Materials and Methods

1. **Study Design :** A descriptive (Retrospective) design was used in the present study, from August 1st , 2023, to March 1st , 2024.
2. **Ethical Considerations :** Official permissions were obtained from relevant authorities prior to data collection. Approval was first secured from the Council of the Nursing College\ University of Karbala under number (UOK.CON.23.006). Participants were informed of the study's overall goals and instructions for filling out the questionnaire to establish their informed consent and make clear that their participation was voluntary. Before, during, and after the study, the researchers assured participants that their information would be kept confidential.
3. **Study Setting :** The research was place in Holy Karbala City at Imam Al-Hassan Al Mujtaba Hospital.
4. **Study Sample:** Convenience sampling was used to select 142 addict male patients for the study, and aimed to identify the influence of adverse childhood experiences on the development of addiction in adulthood.
5. **Study Instrument:** Following a comprehensive review of literature, the researchers find a questionnaire to assess the influence of adverse childhood experiences on the development of addiction in adulthood. The questionnaire comprises three sections: First section: Sociodemographic Information: This section includes Fifteen items covering, site of data collection, age, sex, social status, level of education, monthly income, satisfaction of income, occupation, work hours, residency, types of substance use, duration of substance use, if the addict patients have physical or psychological problems, if the family of addict patients have history of addiction, and numbers of hospital admissions, and adverse childhood experiences, consist of 7 items this questionnaire a dichotomous scale was used for scoring the scale as follows: yes and no (0), and third section Simple Screening Instrument for Alcohol and Other Drugs (SSI-AOD), consist of 21 items, a dichotomous scale was used for scoring the scale as follows: yes and no (0).

## 3. Results of the study

The results of the data was analyzed systematically in tables and these corresponded with the objectives of the study as follows:

The result shows that 39.4% of addicts are with age group of 20 – 29 year. The marital status refers that 50% of addicts are unmarried. Regarding level of education, the highest percentage refers to 50% for those who doesn't read and write. The monthly income indicates that 73.9% of addicts with 300000 – 600000 Iraqi dinars, and 80.3% of addicts perceive insufficient monthly income. The occupational status reveals that 75.1% of addicts are working with free works, 93% of addicts reported that they working for 5 – 8 hours per day. The residency reveals that 51.4% of addicts are resident in rural and 47.2% are resident in urban.

**Table 1. Distribution of Addicts according to their Socio-demographic Characteristics (N=142).**

List	Characteristics	n.	%	
1	Age	> 20 year	12	8.5
		20 – 29 year	56	39.4
		30 – 39 year	48	33.8
		40 – 49 year	25	17.6
		50 and more	1	.7
2	Marital status	Unmarried	71	50
		Married	70	49.3
		Separated/ Widower	1	.7
3	Level of education	Doesn't read & write	71	50
		Read & write	28	19.7
		Intermediate school	15	10.6
		Secondary school	18	12.7
		Diploma/bachelor	10	7
4	Monthly income (Iraqi dinars)	> 300000	14	9.9
		300000 – 600000	105	73.9
		601000 – 900000	8	5.6
		901000 – 1200000	13	9.2
		1201000 – 1500000	2	1.4
5	Perceived monthly income	Insufficient	114	80.3
		Barely sufficient	21	14.8
		Sufficient	7	4.9
6	Occupation	Free work	108	75.1
		Employee	24	16.9
		Student	10	.7
7	Working hours	1 – 4	1	.7
		5 – 8	132	93
		9 – 12	8	5.6
		13 +	1	.7
8	Residency	Rural	73	51.4
		Urban	67	47.2
		Sub-urban	2	1.4

n: number, %: Percentage

This table indicates that 58.5% of addicts are multiple substances abuser. The duration of substances abuse refers that 53.5% are with moderate-term substance abuse (2 – less than 5 years). Regarding physical or mental illnesses, 7% associated with post-traumatic stress disorder, and 7.7% associated with depression. Relative to addict family member, only 10.6% of addicts reported that they have a family member with addiction. The number of admissions of hospital refers to one among 25.4% of addicts while 69% have no admission.

**Table 2. Distribution of Addicts according to their Clinical Characteristics (N=142).**

List	Characteristics	f.	%
1	Substance abused Alcohol	8	5.6

		Drugs	51	35.9
		Multiple substances	83	58.5
2	<b>Duration of substance abuse</b>	Less than 2 years	31	21.8
		2 – less than 5 years	76	53.5
		5 – less than 10 years	30	21.1
		10 years or more	5	3.5
3	<b>Physical or mental illness?</b>	No	116	81.7
		Anxiety	5	3.5
		PTSD	10	7
		Depression	11	7.7
4	<b>Addict family member?</b>	No	127	89.4
		Yes	15	10.6
5	<b>Number of admission</b>	None	98	69
		One	36	25.4
		Two	6	4.2
		Three	1	.7
		Six	1	.7

f: Frequency, %: Percentage

This table illustrates that addicts exposed to moderate level of adverse childhood experience as reported by 42.3% of them ( $M \pm SD = 2.94 \pm 1.874$ ) but 33% of them exposed to mild level of adverse childhood experience.

**Table 3. Overall Assessment of Adverse Childhood Experience among Addicts**

Adverse experience	F	%	M	SD	Ass.
Mild	48	33.8	2.94	1.874	Moderate
Moderate	60	42.3			
Severe	34	23.9			
<b>Total</b>	<b>142</b>	<b>100</b>			

f: Frequency, %: Percentage

M: Mean for total score, SD: Standard Deviation for total score, Ass: Assessment

Mild= 0 – 2.33, Moderate= 2.34 – 4.66, Severe= 4.67 – 7

This table manifests that addicts have moderate severity of alcohol and drugs abuse as reported by 71.8% of them ( $M \pm SD = 8.02 \pm 1.074$ ).

**Table 4. Overall Assessment of Alcohol and Drug Abuse Severity among Addicts**

Severity	F	%	M	SD	Ass.
Mild	40	28.2	8.02	1.074	Moderate
Moderate	102	71.8			
Severe	0	0			
<b>Total</b>	<b>142</b>	<b>100</b>			

f: Frequency, %: Percentage

M: Mean for total score, SD: Standard Deviation for total score, Ass: Assessment

Mild= 0 – 7, Moderate= 7.1 – 14, Severe= 14.1 – 21.

This table exhibits that exposure to adverse childhood experience have significant influence on addiction in adults as reported by significant difference with adverse childhood experience at p-values= .011.

**Table 5. Effect of Adverse Childhood Experience on Severity of Addiction among Adult Addicts (N=142).**

Addiction Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
Adverse Childhood Experience	-.373	.144	-.214	-2.593	.011

#### 4. Discussion

The findings of the study results reveal that 39.4% of addicts are with age group of 20 – 29 year, These findings are similar to those of [12]. the majority of the people that take part in the study were young adults (17–30 years old) [13]. Regarding to marital status the findings reveal that half of addicts are unmarried and 49.3% of them are married these findings in contrast with study results done by and [14] those show around 55.0% and 42% of the participants respectively were married. Regarding level of education, the highest percentage refers to 50% for those who doesn't read and write and 19.7% for those who read and write, The results were in agreement with the findings from (Al-Hemiary et al., 2014) who found that 59% of the illiterate population abused alcohol. According to monthly income satisfaction 80.3% of addicts perceive insufficient monthly income, These findings contrast those of [15] who concluded that 64.7% of the study's sample had adequate income coming in each month. Regarding to type of substance use indicates that 58.5% of addicts are multiple substances abuser while 35.9% of them are on drugs abuse only, These results contradict those of [16] who found that 13.8% of addicts abuse both alcohol and drugs, 34.9% depending only on alcohol, and 2% rely just on drugs, and our research results dis agree with study results done by [17] which revealed that most common substance used was alcohol (82.1 %). According physical or mental illnesses, only 3.5% associated with anxiety, 7% associated with post-traumatic stress disorder, and 7.7% associated with depression, These findings are in agreement with the results reported by

[18] who found that 4% of the samples experience physical health difficulties and 14% have a history of mild to moderate anxiety or depression.

Regarding to adverse childhood experiences among addicts, the results demonstrate that addicts exposed to moderate level of adverse childhood experience as reported by 42.3% of them, These findings are in line with the findings reported by [19] and [20] who discovered that half of the sample (51% and 49.1% respectively) had an ACE score greater than 4 from exposures to ACEs. The results of our study are in agreement with those of [21] who found that a higher percentage of participants ( $p < 0.001$ ) reported at least one adverse childhood experience (ACE), with almost 84% of the sample reporting such an event. The present research findings indicated that addicts associated with mild to moderate adverse childhood experience; 62.7% of the sample losing their parents through divorce or death; 58.5% of them insulted from their parents; and 54.2% felt that no one in their family loved them, The findings of current study contrast the results reported by [22] who found that 29.2% of the participants had experienced the loss of a parent, and 2.8% had been assaulted by a family member.

Regarding to alcohol and drug severity these reveals that 71.8% of addicts associated with moderate severity of alcohol and drugs abuse, these findings are agreement with those of a study conducted by [23] that found that approximately 71 percent of addicts reported using substances often, with cannabis being the most common substance at 50% and benzodiazepines at 38%. The present findings are in line with those of [24] which found that 79.9% of adolescents have had access to alcohol, 73.4% have consumed alcohol, and 6.4% of those had consumed alcohol had developed an alcohol dependence or abuse problem. Fewer than one-third have had the chance to experiment with illegal substances.

According to effect adverse childhood experience on severity of addiction. The current results exhibit that exposure to adverse childhood experience have significant influence on addiction in adults as reported by significant difference with adverse childhood experience at  $p$ -values= .011, These findings are supported by results done by [24] and [25] which demonstrate that the intensity of addiction correlates positively with exposure to adverse childhood experiences (ACEs). The present findings show that adverse childhood experiences (ACEs) are positively associated with the onset and severity of substance use disorders (SUDs) in both adults and adolescents this results consistent with previous studies done by an increase in adverse childhood experiences, elevated risk of beginning drug use in early adolescence or adulthood. Our results agreement with previous researche done, which support the idea that early adversity is positively and significantly correlated with early use. Specifically, it was revealed that the earlier adversity was experienced, the earlier substance use was initiated, and the risk of substance use disorder increases with more exposure to childhood adversity. It is important to note that women tend to have a lower risk than men in this regard. The results of present study are in line with those of [26] who found also that adverse childhood experiences were strongly linked to moderate to excessive drinking in adulthood.

## 5. Conclusion

The present study reveals a significant association between moderate adverse childhood experiences (ACEs) and the severity of alcohol and drug use in adulthood, underscoring the critical influence of early life stressors on the development of addiction. These findings highlight the urgent need for early intervention and targeted prevention strategies to mitigate the impact of ACEs on future substance abuse. The implications are substantial for informing public health policies and clinical practices aimed at addressing the underlying causes of addiction. Further research with larger, gender-diverse populations is essential to explore potential sex differences in this relationship, enhancing the specificity and effectiveness of intervention programs. Additionally, fostering stable parent-child relationships and raising awareness about the risks of ACEs are vital preventative measures. Prompt therapeutic support can significantly reduce the long-term

social and emotional repercussions of ACEs, thereby promoting better mental health outcomes and lowering the prevalence of substance use disorders.

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