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The relationship of childhood maltreatment to deviant behaviours among young Iraqi adults: A cross sectional study

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Abstract

Background: The exposure to stressful events during childhood may have prolonged effects and is associated with a higher risk of psychopathology during adulthood.

Objective: To assess the relationship between exposure to childhood maltreatment and the occurrence of deviant behaviours among Iraqi young adults.

Methods: A cross-sectional study was done from October 2018 to April 2019. A non -random convenient sample that consisted of young adults of age between 18 and 20 years. The childhood maltreatment was measured by Adverse Childhood Experiences Questionnaire, while the deviant behaviours were assessed by Deviant Behaviour Variety Scale.

Results: The participants were 401. There was a positive correlation between ACE score and deviant behaviours score. The male subjects had higher mean of deviant behaviour variety score compare to that of the female subjects. The linear regression model showed that exposure to physical abuse ($\beta = 0.180$, $p < 0.001$), sexual abuse ($\beta = 0.138$, $p = 0.003$) during the first 18 years of age significantly predicts the variety of deviant behaviours.

Conclusion: Childhood maltreatment was associated with high risk for deviant behaviours among young Iraqi adults. The physical abuse was the main predictor for deviant behaviours in adulthood.

Keywords

Adverse childhood experiences, deviant behaviours, young adults, Iraq

Introduction

The effects of childhood maltreatment on adult's physical and mental health have been widely addressed mainly in high-income countries (Franchek-Roa et al., 2017). Literature review shows that the exposure to stressful events during childhood has prolonged effects and may continue through the life span and is associated with high-risk of psychopathology during adulthood (McLaughlin & Lambert, 2017; Moffitt & Klaus-Grawe, 2013). Several studies demonstrated the association between childhood maltreatment with aggressive behaviours of adolescents and adult criminality (Dube et al., 2001; McLaughlin & Lambert, 2017). For instance, the study that conducted by Felitti et al. (1998) found that the subjects who had experienced four or more ACEs score when compared to those who had none, had 4 to 12 fold increased risks for multiple health and social problems, including, alcoholism, drug abuse and for suicidal tendency. On the other hand, the parents who experienced maltreatment during their childhood, they will have harsh parenting behaviours that reflect on their offspring later (Savage et al., 2019).

Studies revealed that the central nervous system could be changed in response to severe external impulses leaving neuronal damage, which provides the evidence of a correlation between stressful events during childhood and later abnormal behaviours (Franchek et al., 2017). The exposure to traumatic events in childhood may have residual effects of brain development (Bremner, 2006; World Health Organization, 2019). Early-life stress can alter hypothalamic-pituitary-adrenal axis function that have adverse effect on behaviours (McEwen, 2007), the pituitary-adrenal dysfunction during adulthood is affected by the kind of experience that had occurred during childhood (Mello et al., 2009).

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Iraq was exposed to severe and dire conditions for long period of time which had negative reflect on their life and behaviours, though there were very few studies that documented the effect of stressful events on behaviours of Iraqi population especially young adults (Al Shawi et al., 2019). The current study based on Iraqi sample of the 'International study of pro/antisocial behaviour in young adults (SOCIALDEVIANCE1820)' which is an ongoing cross-continental longitudinal research project. Its main objective is to explore the intercultural universality of the risk and protective factors that associated with pro/antisocial behaviour and psychosocial adjustment during early adulthood (Basto-Pereira et al., 2020). The purpose of the study is to assess the relationship between exposure to adverse childhood experiences and the occurrence of deviants behaviours among Iraqi young adults.

Method

Participants

A convenience (non -random) sample that consisted of young adults of 18 to 20 years, was chosen from middle and west of Iraq, mainly from universities (Baghdad, Mustansyria, Nahrain, Fallujah and Anbar Universities) and the general community. For young adults (18–20 years) is almost very difficult to get a random sample as some young are students, other are worker, other don't work or study.

Measures and variables

Sociodemographic questionnaire. The instrument consisted of a self-administrated questionnaire that included questions for demographical characteristics (age, gender, job, financial aspect).

The adverse childhood questionnaire. The Adverse Childhood Experiences Questionnaire (ACEs) consists of questions for measuring the events that occurred during the first 18 years of life, including physical, sexual, and emotional abuse, physical and emotional neglect, and different forms of household dysfunction. The questionnaire was widely used in different countries and had good validity and reliability across the world (Dube et al., 2001).

The deviant behaviour variety scale. This scale consists of 19 items measuring the versatility of deviant behaviour (DV) during the last year such as 'Been to school or to classes after drinking alcohol?' Lied to adults (e.g. family members, teachers, etc.)?, Used a motorbike or car to go for a ride without the owner's permission? by responding 'Yes' or 'No' in each question. The reliability of the DV scale in this study was 0.75 (Sanches et al., 2016).

Table 1. Sociodemographic characteristic of the subjects.

	n	%
Gender		
Male	156	38.9
Female	245	61.1
Occupation		
Working	3	0.7
Studying	381	95.0
Working and studying	16	4.0
Did not study or work	1	0.2
Financially independent		
Yes	25	6.2
No	375	93.5
Age mean (*SD*)	18.9 (±0.7)	

All the questionnaire was translated from English to Arabic by the Community Medicine Department at the University of Fallujah. The final approval for the study conduction was obtained from Scientific Committee at University of Fallujah.

The data collection was done during October 2018 to April 2019. The participants were informed about the aims of the study and assuring them that the questionnaire was confidential and would not be used for any purpose except for research, informed consent was obtained from them. The mean time for answering the questionnaire by the subjects was about 15 minutes. Data entry and data analysis were performed using the Statistical Package for the Social Sciences (SPSS, version 21). Statistical tests such as chi square and *t* tests were used to measure the association between the sociodemographic characteristics with adverse childhood experiences and deviant behaviours. Multiple linear regression test was done to assess the association between adverse childhood experiences with deviant behaviours.

Results

This study relies on 401 participants, 61.1% females and 38.9% males, their mean age is 18.9 ($SD = 0.7$) from a Iraqi sample. The majority of the participants were students, and 6.2% of them stated they were financially dependent (Table 1).

We first analysed the frequency of deviant behaviours among the participants. The most frequent deviant behaviour during last year was lying to adults (42.4%). The mean of deviant behaviours score (DV) among participants was 1,7 ($SD = 2.1$), the mean of deviant behaviour variety score for males was 2.3 ($SD = 2.3$), while for females, it was 1.3 ($SD = 1.9$). On the other hand, 169 (42.1%) participants had reported zero deviant behaviours during last year, 67 (16.7%) of the subjects had one, 67 (16.7%) had two, 37 (9.2%) had three, while 61(15.2%)

Table 2. The association of ACEs and deviant behaviours (DV) scores with gender.

	Total		Gender				*p*
			Male		Female		
	N	%	*n*	%	*n*	%	
ACEs score							
0	193	48.1	67	43	138	56.3	.26
1	47	18.5	28	18	34	13.9	
2	65	16.2	27	17.3	38	15.5	
3	25	6.2	11	7	14	5.6	
4+	44	11	23	14.7	21	8.6	
Mean of ACEs (*SD*)							
1.3 (1.7)			1.5 (1.8)		1.1 (1.7)		.03
Deviant behaviours score							
0	169	42.1	46	29.5	123	50.2	<.001
1	67	16.7	21	13.5	46	18.8	
2	67	16.7	34	21.8	33	13.5	
3	37	9.2	15	9.6	22	9.0	
4+	61	15.2	40	25.6	21	8.6	
Mean of deviant behaviours score (*SD*)	1.7 (2.1)		2.3 (2.3)		1.3 (1.9)		<.001
Correlation coefficient (*r*) between ACEs and DV.	.41						<.001

of them had four and more of deviant behaviour score. Male participants showed a significantly higher number of different deviant behaviours than female subjects, 25.6% ($n = 40$) of males had a score of four or more, while only 8.6% ($n = 21$) of females had four or more (see Table 2).

Regarding the prevalence of Adverse Childhood Experiences, the proportion of participants who having at least one ACE was 18.5%, while 11% of the subjects had four or more ACE's. Around 14% (14.7%) of males experienced four or more ACEs, while only 8.6% of females experienced four or more ACEs. Bivariate correlation showing ACEs score had a statistically significant positive association ($r = .41$, $p < .001$) with deviant behaviours (DV) score (Table 2).

The linear regression model showed that exposure to physical abuse ($\beta = 0.180$, $p < .001$), sexual abuse ($\beta = 0.138$, $p = .003$), physical neglect ($\beta = 0.145$, $p = .006$), living with substance abuse household ($\beta = 0.101$, $p < .049$), mental illness in household ($\beta = 0.118$, $p < .015$), being female subjects ($\beta = -0.125$, $p = .001$), and financial independence ($\beta = -0.099$, $p = .037$) during the first 18 years of age significantly predicts the variety of deviant behaviours (more details in Table 3).

Discussion

This study found a positive relation between ACEs score and deviant behaviour; this finding is consistent with what was reported in the literature in high-income western countries, but, up to our knowledge, no previous studies that were conducted to assess the effect ACEs on the behaviours of young adults in Iraq.

The deviant behaviours score was higher among males than females, which was consistent with findings of other studies as the males were more likely to engage in crime and delinquency, this might be due to gender differences in education and socialization (Darrell & Schwartz, 2009; Eitle & Eitle, 2015).

In our study, child physical abuse was the most important predictor for deviant behaviours at the beginning of adulthood. Physical abuse can be defined as the intentional use of physical force against a child that results in physical injury ranging from those without a physical mark on the child to those which cause permanent damage or death. Physical abuse can cause brain maldevelopment that could be associated with aggressive behaviours during adulthood (Centers for Disease Control and Prevention, 2008). Our findings are consistent with a large number of studies showing that childhood maltreatment and household dysfunction are important risk factors for delinquent behaviour later in their life (DeHart et al., 2014; Levenson & Grady, 2016; Rehan et al., 2017). Multiple theoretical approaches have been showing multiple relationships between inadequate parenting, including physical punishment and the risk for later delinquent (Levenson & Grady, 2016; Rutter et al., 2006). High level of stress exposure in childhood may be associated with hyper-arousal, increasing the hormones of fight- or -flight response, and can disrupt the neurons connection during adulthood (Anda et al., 2006). Several studies revealed that exposure to specific types of ACE could affect the sensory neurons of the brain,

Table 3. Multiple linear regression for deviant behaviours score and ACEs forms.

	Deviant behaviour variety score			
	Unstandardized coefficients		Standardized coefficients	*p*
	B	*SE*	β	
1				
(Constant)	2.266	.400		<.001
Gender (female)	−.549	.212	−.125	.010
Financially independent	−.862	.412	−.099	.037
Emotional abuse	.705	.469	.080	.134
Physical abuse	1.076	.297	.180	<.001
Sexual abuse	1.178	.382	.138	.003
Emotional neglect	−.648	.311	−.119	.038
Physical neglect	.812	.294	.145	.006
Divorce separation	.467	.513	.045	.364
Exposure to domestic violence	.075	.292	.013	.799
Substance abuse household	1.194	.605	.101	.049
Mental illness in household	.912	.372	.118	.015
Incarcerated household member	.733	.451	.080	.105

which were involved in perceiving the trauma that was experienced (Herzog & Schmahl, 2018; Teicher & Samson, 2016). On other hand, certain evidence suggests that some associations may be explained by pre-existing vulnerabilities (Danese, 2020).

Sexual abuse and household substance abuse were predictors of deviant behaviour among adults, similar findings were reported by other studies (Levenson & Grady, 2016). The effect of harsh parenting and physical abuse of the children might be exaggerated by presence substance abuse among family members (Dube et al., 2001). Child sexual abuse is associated with several negative psychosocial outcomes in its victims throughout life including psychopathological symptoms and/or deviant behaviour (Maciel & Basto-Pereira, 2020).

This study is not free of limitations. First, this is not a random sample; it was not possible to provide a randomized sample of Iraqi young adults, because the current unstable situation of Iraq prevents visiting the houses to conduct household to household survey. Such non -random sample might not represent the general population of young adults in Iraq. Additionally, the retrospective measures of ACEs might be associated with recall bias of the participants.

To sum up, this is probably the first study conducted in Iraq addressing the link between childhood maltreatment and antisocial behaviour. In our study, multiple forms of child maltreatment and household dysfunction were associated with a higher level of antisocial versatility. The physical abuse was the most important predictor of deviant behaviours during young adulthood. Future public policies in Iraq shall create awareness for the inherent risks of child physical abuse.

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Ethical considerations

Ethical issues have been completely observed by the authors.

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