Original Article

The Impact of Adverse Childhood Experiences on Adulthood Aggression and Self-Esteem-A Study on Male Forensic Clients

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Abstract

Background: Adverse childhood experiences (ACEs) are stressful or traumatic events, including abuse and neglect. The long-term effects of adverse childhood experiences (ACEs) occurring during childhood or adolescence; may lead to a wide range of physical and psychological health issues throughout a person's lifespan. Children with ACEs, develops poor relation skills and low self-esteem, which may increase the likelihood of interpersonal problems and physical aggression in adult life. The current study examined the correlation among adverse childhood experiences (ACEs), self-esteem, and aggressive behavior.

Materials and Methods: The sample included 350 adult male clients, accused of physical aggression in forensic setting. All participants completed interviews, focusing on different types of maltreatment prior to age 18, using the modified standardized Adverse Childhood Experiences International Questioner (ACE-IQ) and self-esteem level by Rosenberg Self-esteem Scale.

Results: The most commonly reported adverse experience was family dysfunction, mainly violence in the family that caused problems. Strong correlations were shown to exist between various ACEs and aggressive behavior. Negative correlation detected between self–esteem and all categories subjected for ACE except sexual abuse and community violence (P=0>.05).

Conclusion: Much attention has been focused on adverse childhood experiences as risk factors for a spectrum of violence-related outcomes during adulthood.

Keywords: Adverse Childhood Experiences (ACEs), Adult Male, Self-esteem, Aggressive Behavior, Male Client, Forensic Medicine

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Introduction

Adverse childhood experiences (ACEs) are stressful or traumatic events, including multiple types of abuse; neglect; violence between parents or caregivers; other kinds of serious household dysfunction such as alcohol and substance abuse; and peer, community and collective violence[1].

It has been shown that considerable and prolonged stress in childhood has life-long consequences for a person's health and well-being[2].

Adverse childhood experiences (ACEs) occur regularly with children aged 0 to 18 years across all races, economic classes, and geographic regions; however, there is a much higher prevalence of ACEs for those living in poverty[3,4]. Adverse childhood

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experiences, violates the trust at the core of a human's relationship with the world[5].

The consequences of childhood maltreatment can be devastating. A large body of research described a variety of short- and long-term consequences including psychological, economic, and physical effects of ACEs at all stages of life, with special focus on relationships with mental illness[6,7].

Psychological consequences range from chronic low self-esteem to severe dissociative states. The cognitive effects of abuse range from attentional problems and learning disorders to severe organic brain syndromes. Behaviorally, the consequences of abuse range from poor peer relations all the way to increase the risk of violent offending in late adolescence and early adulthood. Thus, the consequences of abuse and neglect affect the victims themselves and the society in which they live[8,9].

Physical aggression and antisocial behavior are among the most consistently documented childhood outcomes of physical child abuse. Most studies document physical aggression and antisocial behavior using parent or staff ratings[10].

Historically, low self-esteem as a long consequence of ACE, has often been viewed as playing an important role in aggressive behavior[11].

Systematic review in forensic psychiatry found that, low self-esteem rather than high self-esteem is related to aggression; however there are a significant number of studies which indicate that high self-esteem is related to aggression, and yet more which present mixed evidence[12].

Although empirical studies supporting a link between childhood maltreatment and later low self-esteem and adulthood aggression; associations between subtypes of childhood maltreatment and specific forms of victimization in adulthood is less clear[13]. Despite larger prevalence and burden of ACEs in developing countries, the majority of ACE studies have been conducted in industrialized countries[14].

A 10 year literature review article regarding aggressive and violent behaviors in Iran showed that prevalence of violence and aggression among the Iranian adolescents and youth ranged from 30% to 65.5% while males being 2½ times more affected than females the role of gender, family environment, family size, socioeconomic status, and victimization in perpetuating the circumstances was apparent.

All articles in mentioned study, pertaining to the prevalence of the problem, but much less information is available about ACE scores as a predictor of aggressive behavior later in adult life.

Considering the lack of studies about effects of ACEs on aggression behavior of those involved in community conflict, mainly male; this study was designed to examine impact of ACEs in male violent offenders within the Tehran Forensic Service[15].

Methods

The present study was conducted as part of a cross sectional study (descriptive–analytic) of men accused of physical aggression (n=350)involved in community conflict, referred to legal and clinical forensic service for evaluation of injuries, October 1, 2015 to February 10, 2016, Tehran.

Upon giving their consent, data were collected by using 3 different questioners.

Participants in the study were male, aged above 18 which accused of physical aggression due to community conflict, towards one's per inclusion criteria.

1. Demographics Questionnaire: A specific, research-goal oriented questionnaire was developed to obtain demographic information about participants i.e., age, educational level, marital state and occupation.

2. Adverse Childhood Experiences International Questionnaire (ACE-IQ): In response to the use of ACE in various cultural contexts, WHO developed the ACE-International Questionnaire including :Six domains: Core questions(C), Marriage questions (M), Parents/guardian questions (P), Family questions (F), Abuse questions (A), Violence questions, Peer (V), and 13 categories (43 items) to measure ACEs around the world, including low- and middle-income countries, and to be integrated into broader health surveys(18, 19).This screening questionnaire intended to measure types of childhood abuse or trauma; neglect; household dysfunction; peer violence; sexual and emotional abuse, and exposure to community and collective violence ,to people aged 18 and over in all countries. Standardized ACE-IQ will enable the measurement of childhood adversities in all countries and comparisons of such adversities between them.(16).

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Participants had the option of answering "yes" "no"to questions. For each participant, we calculated a total event score that represents total exposure to ACEs.

The total ACE event score was calculated by summing the number of events to which a participant was exposed. The ACE score was then categorized into 0, 1, 2, 3, or ≥4 exposures (17).

Reliability: Given that ACE-IQ provides retrospective reports of one's Adverse Childhood Experiences, we would expect test–retest reliability to provide the indication that the measures used to assess ACEs will lead to stable responses over time. World Health Organization (WHO) studies validated ACE-IQ by implementing it as part of broader health surveys in 6-8 countries (17).

3. Rosenberg Self-esteem Scale (RSE1965): This 10-item scale validated for Iranian population assesses an individual's feelings of self-worth when the individual compares himself or herself to other people. The scale is an attempt to achieve a one-dimensional measure of global self-esteem. All items were answered using a 4-point Likert scale format, ranging from strongly agree to strongly disagree. The score between 15-25 are considered average, where a score less than 15 may indicate problematic low self-esteem (18)

Statistical Analyses: The analyses were performed using the IBM SPSS Statistics version 20.0. First, a descriptive analysis of the data was carried out, reporting the proportions of the independent variables and outcomes, and their respective 95% confidence intervals (95% CI).

Then a bivariate analysis was conducted to attain the strength of relationships or correlations between adverse childhood experiences with self-esteem in violent clients.

In revealing the positive or negative correlation between adults' childhood abuse and self-esteem, Pearson Product-Moment Correlation Technique is used. Whether childhood abuse significantly determine self-esteem is tested with regression analyses.

Results

Demographic profile: The description of the sample according to the socioeconomic, demographic, behavioral and health characteristics of the male violent offenders is presented in Table 1

Participants were between 18 to 45 years old (M=30.93; SD=8.06), mostly in age group 25-34 years (39.1%). In terms of education, 10.6% were Illiterate/ semiliterate, 28.9% had not completed high school, 38.3% had a high school diploma or its equivalent, and 22.3% had completed college credits or received a college degree. The majority of participants (27.4%) were unemployed, 65.5% of participants were employed (12.6% government employed and 52.9% self-employer), and 7.1%were retired.

Most of the participants (52.9%) were single.Smoking was the most usual habit (38.3%) reported by majority of participants (66.0%). Use of Illegal drug or alcohol reported by 34.0% and 14.6% respectively. 13.1% involved in other habits. The main causes of conflict were, financial problem (45.7%), moral or value subjects (43.7%), social issues (8.9%), and other subjects (1.7%) accordingly. violent action were mostly (66.9%) accompanied by using Hands, Fists, Feet, etc. History of pervious conflict in more than one time, reported by 73.4% responders. Demographic, behavioral and health characteristics of the participants are shown in Table 1.

ACE-IQ score measurement: To calculate the ACE score using the binary version; participant's affirmative answers (whether with once, a few times, or many times), counts as a yes, and so that response 1 placed in the final column. Once completed, answer score categorized into 0, 1, 2, 3, 4 and above in which, alpha coefficient of score on Parents/guardian questions (P), Family questions (F), Abuse questions (A), Violence questions (V), were found to be 081, 099, 095, 088 respectively. Internal consistency for the 38 items excluding demographic variables yielded 0.88. Cronbach's α coefficients for the scores on ACE IQ and the scores on Physical abuse, Emotional abuse and Sexual abuse were 0.85, 0.93, and 0.44, respectively.

Total ACEs, score range from 7-22 (categorized into ≥4), with mean±SD (12.6±4.7) measured for all participants. Majority of participants (65.1%) reported having experiences of ≥4 ACE and 34.9% reporting 3 ACE. The most commonly reported ACE was Family dysfunction (mean±SD, 3.93±2.38) mainly family violence (mean±SD, 1.79±0.63); followed by abuse

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Table 1: Demographic, behavioral and health characteristics of the participants.

Variable		Number	Percent	Mean±SD
Age	18-24 years	96	27.4	30.9±8 (18-45years)
	25-34 years	137	39.1	
	35-45years	117	33.4	
Education	Uneducated/primary	37	10.6	
	Sec/High school	101	28.9	
	Diploma	134	38.3	
	University	78	22.3	
Marital State	Single	185	52.9	
	Married	130	37.1	
	Divorced	24	6.9	
	Widow	11	3.1	
Occupation	Jobless	96	27.4	
	Government Employer	44	12.6	
	Self-Employer	185	52.9	
	Retired	25	7.1	
Habit	Smoking	134	38.3	
	Illegal Drugs	119	34.0	
	Alcohol	51	14.6	
	Excreta	49	13.1	

Table 2: Regression Analysis for association between ACE Score and Subscales of the participants.

Coefficients			
Model	**ß**	**t**	**Sig**
F-Family Violence	.687	15.08	.000
A-Abuse Experiences	.211	6.35	.000
P-Parental Dysfunctions	.102	4.077	.000
V-Violence	.98	1.81	.041

Table 3: Correlation between childhood abuse and self-esteem in Violent Clients.

Self-Esteem						
Subgroup		**ß**	**t**	**Sig. (2-tailed)**	**CI**	
					Lower Border	Upper Border
Abuse		- .349	1.98	.04	.938	.004
	Phys. Abuse	- .619	5.62	.000	.261	1.25
	Emot. Abuse	- .398	2.58	.01	1.34	.182
	Sex. Abuse	- .249	1.65	.09	.061	.697
Family dysfunction	Family abuse	- .029	.227	.8	.399	.316
	Family divorce	- .294	1.97	.04	.003	1.02
	Family violence	- .261	2.81	.005	.193	1.08
Parenting						
	Emotional neglect	- .171	1.25	.004	.942	.210
	Physical neglect	-1.40	7.40	.02	1.41	2.43
Violence						
	Bulling	- .177	.779	.000	2.231	.966
	Community Violence	- .074	.289	.29	1.88	1.405
	Collective Violence	- .279	.778	.02	.611	1.410

(Physical) (mean±SD, 3.19±1,14) mainly physical abuse (mean±SD, 1.57±,49); Parenting (mean±SD, 2.56±0.73) emotional neglect (mean±SD, 1.66±0.72), and Violence (mean±SD, 2.90±1.03) mainly bulling

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(mean±SD, 1.66±0.47) respectively.

The relationship between ACE Total and all ACE Subscale scores indicate a significant positive correlation (P=<0.001). Again logistic regressions used to address the magnitude of association between total ACE score and each subscale, which suggested Family Valence with larger magnitude (ß=0.687, t=15.8, P=0.000), followed by Abuse experiences (ß=0.211, t=6.35, P=0.000), Parenteral Dysfunctions (ß=0.102, t=4.7, P=0.000), and Violence (ß=0.98, t=1.81, P=0.04) respectively. Shown in Table 2.

Rosenberg Self-esteem Scale (RSE) measurement: After calculating the sum scores of all ten items, two groups of potential participants –those scoring above the cutoff (10.9%) and those scoring below the cutoff (89.1%).

In this empirical study correlation between childhood abuse and self-esteem analyzed, initially and subsequently, regression analyses used to assess the association between ACE and self-esteem in sample study. As shown in Table 3, a negative correlation detected between self–esteem and all categories subjected for ACE except Contact sexual abuse and community violence (P>0.05).

According to data available on table, self- esteem was correlated negatively with physical abuse (ß=0.619, t=5.62, P=0.000), and bulling (ß=-0.177, t=0.779, P=0.000). No relation found between self – esteem and family abuse (ß=-0.029, t=0.227, P=0.8) and community violence (ß=-0.074, t=0.289, P=0.2).

Discussion

In this study, we assess the links between adverse childhood experiences and adulthood aggressive behavior in a forensic setting. Our findings demonstrated relationship among adverse childhood experiences, low self-esteem and aggressive behavior in our sample study.

According to factsheet from Child Welfare Information Gateway; the lifelong psychological effects of abuse and neglect, includes low self-esteem, depression, and relationship difficulties[19]. Several studies have documented the correlation between child abuse and future juvenile delinquency. Children who have experienced abuse are nine times more likely to become involved in criminal activities[20]. Lee et al, 2007, in his study suggested that Child maltreatment has been consistently linked to aggression[21].

De Venter et al, 2013 in their systematic literature review article, summarized the available research and concludes that adolescents' exposure to chronic and acute episodes of violence associated with a range of distress symptoms, including internalizing (i.e., depression, anxiety, low self-esteem) and externalizing behavioral problems (conduct problems, socialized aggression and tension problems) and impaired social, emotional, and cognitive functioning[22].

In recent years, much attention has been focused on the consequences of child sexual abuse, especially the adolescent and adult anger feel, depression, anxiety, low self-esteem[23,24].

No relation detected between childhood sexual abuse experiences (ACE subscale question) and self-esteem in this study because of many individuals from Asian communities' feelings of embarrassment by (sharm) that discussions. Meanwhile, Muslims may see such discussion as contrary to haya (natural modesty) which results in under-reported childhood sexual abuse experiences[25]. A growing body of literature suggests the relationship between childhood abuse and neglect and long-term consequences on the adolescence and adulthood, considerable uncertainty and debate remain. Not all children who have been abused or neglected will experience long-term consequences, but they may have an increased susceptibility[26].

Individual factors such as personal characteristics of the child, type of maltreatment, circumstances of the abuse or neglect, and the child's environment. Low intelligence in the child may help stimulate abusive behavior by the parent or caretaker, but low intelligence can also be a consequence of abusive experiences in early childhood[27].Ultimately, due to related costs of short and long consequences of childhood abuse and neglect impact to public entities, it is imperative for communities to provide a framework of prevention strategies and services before abuse and neglect occur and to be prepared to offer remediation and treatment when necessary.

While several significant results figure out in this study, some limitations ought to be noted. One limitation includes the nature of the sample employed in this study. First, the sample included participants exclusively comprised men accused of physical

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violence to another person in one of the forensic unit in Tehran, while they referred to other units as well, and thus may not be fully representative of the full range of violent men with childhood maltreatment experiences. Second, this sample was almost certainly positively selected on men accused of violence, so it is unclear to what extent they may be generalized. I suspect that because of this selection, there are the reason to study individuals of opposite party of conflict for comparison. Moreover, study in other parts of Iran with the different geographic location is needed.

Conclusion

There are many research on the long-term consequences of childhood adverse experiences. The effects of childhood maltreatment vary depending on the circumstances of the abuse or neglect, personal characteristics of the child, and the child's environment. Consequences may be mild or severe which may affect the child physically, psychologically, behaviorally, or in some combination of all three ways. Ultimately, much attention has been focused on adverse childhood experiences as risk factors for a spectrum of violence-related outcomes during adulthood on behalf of public entities.

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