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RESEARCH ARTICLE

Relationship between childhood experiences and suicidal attempts among adults in Baghdad

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Abstract

Background: Adverse childhood experiences are associated with significant functional impairment and life loss in adolescence and adulthood. Exposure to multiple risk factors during childhood is associated with higher rates of depression, tobacco use, alcoholism, illicit drug use, and attempting suicide

Objective: To through light on the possible relationship between childhood experiences and suicidal attempts during adulthood in a sample from Baghdad city.

Methods: This cross-sectional study was conducted in Baghdad city during the period from January 2013 through January 2014. A multistage sampling technique was adopted to choose 13 primary health care centers and eight colleges from three universities in Baghdad. Childhood experiences were measured by applying a modified standardized Adverse Childhood Experiences International Questionnaire form. Suicidal attempt was measured by a question if there was any attempt for suicide during their previous life.

Results: A total sample of 1000 individual was studied. The results revealed that forty one (4.1%) participants had history of suicidal attempts, suicidal attempts shows a strong positive association with mean score of household dysfunction and abuse (Cohen's d = 0.72) and Positive history of suicidal attempts shows strong inverse association with mean score of bonding to family (as Cohen's d = -1.04 which is considered as large effect size).

Conclusion: It can be concluded from this study that suicidal attempts in our population are not uncommon, and may be more prevalent than many countries. This might be an indicator for the repeated disastrous events that the Iraqi people have experienced during the last three decades.

INTRODUCTION

Children who reside in homes marked by domestic violence are exposed to various forms of aggression, which may include repeated physical assaults, mental humiliation and degradation, threats of suicide and homicide, and destruction of property. Those Children tend to experience difficulties with internalized and externalized behavior problems, social skills deficits, and academic functioning.[1]

The Adverse childhood experiences (ACE) literature shows that exposure to multiple risk factors during childhood is associated with higher rates of depression, tobacco use, alcoholism, illicit drug use, and attempted suicide.[2-4]

The ACE study found a strong and graded relationship between the amount of exposure to adverse childhood events and rates of substance use disorders, suicide attempts, and increase risk for alcoholism.[5] ACE score has strong, graded relationship to attempted suicide during childhood, adolescence and adulthood.[6]

Perceived anomalous parenting styles have been found to be associated with suicidal behavior, a low level of perceived parental care and a high level of parental control are associated with a repetition of suicidal behavior. Along the same line; a lower level of care and a higher level of maternal over protectiveness were found in adolescents with suicidal ideation and those who had committed suicide attempts.[7]

For more than three decades, the Iraqi nation as a whole has been suffering from wars, sanctions and urban violence.[8-10]The Iraqi people witnessed (to present) the painful and terrible consequences of car bombing, mass violence, and military operations.[11] The Iraqi children and youth have been so greatly affected by these dire conditions, facing disease, starvation; psychological trauma and death.[12, 13]

The objective of this study is to through light on the possible relationship between childhood experiences and suicidal attempts during adulthood in a sample from Baghdad city.

Methods:

This cross sectional study was conducted in Baghdad city during the period from January 2013 through January 2014. The target population was males and females age between 18-59 years, this range was to widen the spectrum and to increase the number of end points. Individuals age 60 years and more were not included in the study to avoid interference of other factors that may confound the outcome and make the inference of the study questionable. The source of data collection was from:

- Primary health care centers (PHCCs): a multistage random sampling technique was used. Baghdad is divided into 16 health sectors, out of these; five sectors were chosen by a simple random technique. The total number of PHCCs in these five sectors was 60 with a mean number of 12 PHCCs for each sector; three PHCCs were chosen from each sector contains more than 12 PHCCs and two from each sector with less than 12 PHCCs through a simple random sampling to achieve equity of choosing PHCCs according to the density of its distribution. So, 13 PHCCs from the two main sides of Baghdad city were collected that represent central and peripheral sectors. Data were collected from daily attendants of the PHCCs through a systematic random sampling technique by including every fourth one.

- **Universities:** A multistage random sampling technique was adopted by selecting three universities out of the five that are present in Baghdad through a simple random sampling technique, then some colleges were selected from each university by a simple random sampling technique (eight colleges were chosen), and one stage from each college again by a simple random technique; all students of that stage, who were available at the time of data collection, were included in the sample.

Instruments: The questionnaire consisted of the following items:

- **Socio-demographic information:** Age (18-59 years), current education level, history of smoking habits and alcohol drinking whether previously or currently.

- Adverse childhood experiences (when the age was 15 years or less) including:

- Household dysfunction and abuse.
- Exposure to community and collective violence.

Adverse childhood experiences: were measured by applying a modified standardized Adverse Childhood Experiences International Questionnaire (ACE-IQ) form that was developed by WHO [14] and includes:

Categories of household dysfunction and abuse include: psychological abuse, physical abuse, household dysfunction including violence against mother or other household members, living with household members who are (substance abusers, mentally ill or suicidal), ever imprisoned, and parent's loss during childhood.

Witnessing community violence includes seeing or hearing someone being beaten, stabbed or shot in real life. Exposure to collective violence includes wars, terrorism, political or ethnic conflicts, repression, disappearance and torture.

- Positive childhood experiences: were indicated by bonding to family and parental monitoring (when the age was 15 years and less):

- Bonding to family was measured by a modified five items derived from an instrument [15, 16] and from questions about relationship with parents that were presented in ACE-IQ.[14] Responses for questions of bonding to family range from "Strongly Disagree" to "Strongly Agree" on a four point Likert scale. Three items for parental monitoring were put as indicators: time spent talking about school and other activities of the day, time spent playing with the subjects and knowing (who) their friends are. Possible responses for parental monitoring items ranged from "almost never" to "often". [15]

- **Suicidal attempt** was measured by a question if there was any attempt for suicide during his /her life.
- The variables were translated, defined and carefully explained to the respondents to avoid any misunderstanding, in addition, a pilot study was done, built on which, some modifications were done on certain questions and also on the wording and translation. The questionnaire was filled through a direct interview with the respondents after explaining to them the aim of the study.

  Ethical issue: As this is a very sensitive issue (considering the Iraqi culture), it was decided to avoid any questions that refer to unaccepted norms or triggering a social stigma like sexual abuse during childhood. Preceding the interview, the researcher explained to the respondents the aim and concept of the research, assuring them that all the information would be kept strictly confidential and would not be used for anything other than research purposes. The questionnaire was anonymous, and the subjects were given the choice to participate or not. Verbal consent was taken

Data Analysis: Data entry followed by descriptive and analytic statistics were performed using the Statistical Package for Social Science (SPSS- version 21).

Standardization scores of household dysfunction- abuse and community-collective violence were calculated to each participant according to the following equation: Standardization score (/100)= sum (Q1 to Q n) * 100 /(count valid * upper limit of scoring of the questions in the scale).

- Sum (Q1 to Q n) = summation of questions answers for that scale.
- Count valid = number of answered questions of that scale.

The aim behind standardizing the scores was to bypass the effect of missed questions, and to give a unique way in the analysis (all scores started from zero to 100).

- Quartiles for household dysfunction- abuse, community-collective violence and family bonding scores were calculated (four quartiles for each score), we used quartiles in order to have more specific meanings during the interpretation of the results and to easily compare between graded quartiles.
- Cronbach's Alpha reliability for household dysfunction-abuse items was 0.76.
- Cronbach's Alpha reliability of family bonding scale was: 0.86.
- Cohen's (d) was used to estimate the effect size for independent samples t-tests.

The interpretation of Cohen's (d) as follows:[17]

- Cohen's (d) up to 0.3 is considered as small effect size.
- Cohen's (d) more than 0.3 to 0.7 is considered a medium effect size.
- Cohen's (d) more than 0.7 is considered as large effect size.

Results:

Description of study sample: A total of 1040 subjects were surveyed and 1000 were responded making a response rate of 96.2 %. The respondents' age ranged from 18 to 59 years with a mean of 32.08±11.169, females constituted a higher proportion (58.3% of the study sample) (Table 1).

Exposure to household dysfunction and abuse: Table (2) shows that father's death (when the subject's age was less than 15 years) was seen in 104 (10.4%) of the participants, while mother's death (when the subject's age was less than 15 years) was seen in 21 (2.1%) of them. Parents' separation was registered in 30 (3%) of the subjects. Seeing or hearing a parent or household member in home being yelled at, screamed at, sworn at, insulted or humiliated was reported in 469 (46.9%). Seeing or hearing a parent or household member at home being slapped, kicked, punched or beaten up was seen in 331(33.1%), a parent or household member in home being hit or cut with an object, such as a stick, bottle, club, knife or whip was reported in 175 (17.5%). A parent, guardian or other household member yelled, screamed or swear at, insulted or humiliated was registered in 387 (38.7%). A parent or other household member spanked, slapped, kicked or punched was seen in 335 (33.5%). (All items in table 2 represent the response of sometimes and frequently).

Table 1:Socio-demographic characteristics of the study sample

N=1000	N	%
Gender		
Female	583	58.3
Male	417	41.7
Total	1000	100.0
Age group (years)		
<30	498	49.9
30-39	227	22.7
40-49	177	17.7
50-59	98	9.7
Total	1000	100.0
Highest level of education completed		
Primary school	135	13.5
Intermediate	127	12.7
Secondary	122	12.2
University/Diploma	603	60.4
Post graduate	13	1.2
Total	1000	100.0

Table 2: Frequency distribution of household dysfunction and abuse items

N=1000	N	%
Household dysfunction and abuse items (age below 15 y):		
Father died when the subject was < 15 years old.....	104	10.4
Mother died when the subject was < 15 years old……..	21	2.1
Parents separated when the subject was <15 years of age.....	30	3.0
Live with a household member who was a problem drinker, alcoholic, or misused street or prescription drugs.....	133	13.3
Lived with a household member who was depressed, mentally ill or suicidal....	83	8.3
Lived with a household member who was ever sent to jail or prison.....	105	10.5
Saw or heard a parent or household member in home being yelled at, screamed at, sworn at, insulted or humiliated.....	469	46.9
Saw or heard a parent or household member in home being slapped, kicked, punched or beaten up.....	331	33.1
Saw or heard a parent or household member in home being hit or cut with an object (stick, bottle, club, knife, whip,... etc..).....	175	17.5
If a parent, guardian or other household member threaten, or actually, abandon you or throw you out of the house.....	137	13.7
If a parent, guardian or other household member yelled, screamed, at you, insulted or humiliated you.....	387	38.7
If a parent, guardian or other household member did slap, kick, punch or beat you up	335	33.5
If a parent, guardian or other household member hit or cut you with an object, such (stick, bottle, club, knife, whip .....etc.....	162	16.2
If bad treatment resulted in injury.....	33	3.3

Exposure to Community Violence (age below 15 years): The results shows that the most common trauma event of community violence which was reported by the participants was seeing or hearing someone being beaten up in real life (48.3 %), or being threatened with a knife or gun in real life was reported in 181 (18.1%). A family member or friend kidnapped or beaten up by soldiers, police, militia, or gangs happened for 148 (14.8%). A family member or friend killed by soldiers, police, militia, or gangs occurred for 172 (17.2%).

Bonding to family (age below 15 years):

The results demonstrates that 74.8 % of the subjects like to be the kind of people their parents were, the parents made them feel trusted in 83.4%, while 77.5% of the participants have parents who understood their problems and needs, parents spent time talking with the subjects about activities of the day and playing with them during

childhood and adolescence were reported in 69.2 %.

The result revealed that 4.1% of the sample reported history of suicidal attempts

Relationship of childhood experiences to suicidal attempts

Table (3) shows that the mean score of household dysfunction and abuse is higher for subjects with a positive history of suicidal attempts (22) compared to those without any history of suicidal attempts (12.2), the difference observed was statistically significant ($p < 0.001$).

A positive history of suicidal attempts shows a strong positive association with mean score of household dysfunction and abuse (Cohen's $d = 0.72$).

The mean score of bonding to family is higher for subjects with a negative history of suicidal attempts (75.8) compared to mean score of bonding to family of those with a positive history of suicidal attempts (54.1). Positive history of suicidal attempts shows strong inverse association with mean score of bonding to family (as Cohen's $d = -1.04$ which is considered as large effect size).

Discussion: The question of what determines adult health and well-being is important to all countries, ACEs have been consistently linked to mental and physical health problems in children and adults. Most of the researches documenting these associations have been performed on clinical and/or cross sectional samples. Mental health consequences of ACEs may disrupt the normal developmental processes, increasing the risk of poor adult adjustment.[3,18]

Study sample: females consisted a higher proportion of the sample as the most common clients in PHCCs were females, the same thing was seen in college students, this could be attributed to the general condition of the country which led to some demographical changes as violence was a leading cause of death and migration of men during the period following 2003 invasion.[19,20]

The results demonstrated that 4.1% of the subjects had a history of suicidal attempts during their previous lifetime, this finding is consistent with a similar USA study in which life time prevalence of having at least one suicidal attempt was 3.8%.[21] Suicide worldwide was estimated to represent 1.3% of the total global burden of disease in 2004[22], unfortunately studies on suicide in Iraq and other Arab countries are scarce.

Mental disorders (particularly depression and alcohol use disorders) are major risk factors for suicide in Europe and North America; however, in Asian countries; impulsiveness plays an important role, generally, suicide is a complex matter with psychological, social, biological, cultural and environmental factors.[22]

Our results demonstrate that a high family bonding score has a strong inverse relationship with suicidal attempts; this finding is consistent with other researches which showed that among familial factors, specifically the style of parenting, plays a role in the risk of suicidal ideation and attempts.[7] A positive history of suicidal attempts showed a strong positive association with mean score of household dysfunction and abuse; this is consistent with what was reported in the literatures.[5,23]

A study in Iran showed that family conflict is the main factor contributed to attempted suicide followed by marital problems and economic constrains.[24]

The results also revealed that family bonding has a higher effect on suicidal attempts compared to that of household dysfunction and abuse; therefore policy-makers should consider these differences in building programs for intervention and prevention of suicide thoughts and attempts.

It can be concluded from this study that suicidal attempts in our population are not uncommon, and may be more prevalent than many countries considering the probable under reporting in the current study, as this practice is not an accepted norm in our country. This might be an indicator for the repeated disastrous events that the Iraqi people have experienced during the last three decades.

Limitations of the study:

- The data of adverse childhood experiences are based on self-report and recall for a period that may extend to several years, so recall bias cannot be excluded.

- As this is a very sensitive issue in our culture; we expect that there is a sort of underestimation in spite of the efforts done by the researchers to assure the interviewees that all the information will be kept strictly confidential.

Table 3: Suicidal attempts in relation to childhood experiences

	Suicidal attempts			
	No	**Yes**	**P***	**Cohen's d**
Score of household dysfunction and abuse (/100)			<0.001	0.72
Median	7.1	22		
SD	13.4	17		
SE	0.43	2.66		
N	953	41		
Score of exposure to community violence (/100)			0.13[NS]	0.24
Median	14.3	23.9		
SD	21.1	21		
SE	0.69	3.28		
N	933	41		
Score ofbonding to family (/100)			<0.001	-1.04
Median	79.1	54.1		
SD	20.5	27.1		
SE	0.67	4.24		
N	952	41		

*** P value for t test.**

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