QMJ
A peer reviewed journal
QATAR MEDICAL JOURNAL

RESEARCH ARTICLE

# Relation between childhood experiences and adults' self-esteem: A sample from Baghdad

Ameel F AlShawi[1], Riyadh K Lafta[1,2]

Address for Correspondence:
Ameel F AlShawi
[1]College of Medicine, Mustansiriya University, Iraq
[2]University of Washington, Seattle, WA, USA
Email: ameelalshawi@gmail.com

http://dx.doi.org/10.5339/qmj.2014.14
Submitted: 10 August 2014
Accepted: 30 November 2014
© 2014 AlShawi, Lafta, licensee Bloomsbury Qatar Foundation Journals. This is an open access article distributed under the terms of the Creative Commons Attribution license CC BY 4.0, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

Cite this article as: AlShawi AF, Lafta RK. Relation between childhood experiences and adults' self-esteem: A sample from Baghdad, Qatar Medical Journal 2014:14 http://dx.doi.org/10.5339/qmj.2014.14

QSCIENCE.com
An Initiative of Qatar Foundation

## ABSTRACT

Background: Adverse childhood experiences are associated with significant functional impairments and loss of life in adolescence and adulthood. Literature documents the conversion of traumatic emotional experiences in childhood into psychological disorders later in life. The family is one of the most critical risks and resilient factors for mental health in adolescence and emerging adulthood.
Objective: To estimate the effect of childhood experiences on self-esteem 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 to January 2014. Multistage sampling techniques were used to choose 13 primary healthcare centers and eight colleges from three universities in Baghdad. Childhood experiences were measured by applying a modified standardized Adverse Childhood Experiences International Questionnaire (ACE-IQ) form.
Results: A total of 1040 subjects were surveyed and 1000 responded giving a response rate of 96.2%. The results revealed that 82.7% of the participants were confident within themselves, 14.9% (149) reported to feel a failure, while 28.3% of subjects expressed feeling useless at times. The score for family bonding is expected to significantly increase the score for self-esteem by a mean of 21.48. University, diploma and higher education are expected to significantly decrease the self-esteem score by a mean of −6.31 compared to those with less than secondary school education. Parents education show statistically insignificant association with the mean score for self-esteem.
Conclusion: The findings of this study give an insight into the essential role of childhood experiences in

building self-esteem and adaptation later in their life. National health programs are suggested for intervention targeting early adverse childhood experiences and their consequences.

Keywords: childhood experiences, self-esteem, Baghdad

## INTRODUCTION

Adverse childhood experiences (ACEs) refer to some of the most intense and frequently occurring sources of stress that children may suffer early on in life. Such experiences include multiple types of abuse; neglect; violence between parents or caregivers; community and collective violence.[1] ACEs are associated with significant functional impairment and loss of life in adolescence and adulthood.[2]

Self-esteem represents the affective, or evaluative, component of self-concept; it signifies how people feel about themselves and is considered an important outcome of psychological resilience.[3,4]

Several articles have documented an association between adolescents' exposure to chronic and acute episodes of violence and 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.[5] Consequences of child maltreatment include impaired lifelong physical and mental health, and the social and occupational outcomes can ultimately slow a country's economic and social development.[6] Progress in preventing and recovering from a nation's worst health and social problems is likely to benefit from understanding that many of these problems arise as a consequence of adverse childhood experiences.[7]

The family is one of the most critical risks and resilience variables for substance abuse in adolescence and emerging adulthood.[8] The most consistently reported variables that facilitate positive adaptation under the conditions of risk are connections with competent caring adults, good intellectual functioning, self-regulation skills, and positive self-image.[9]

For more than three decades, Iraq has been suffering from wars, sanctions and urban violence.[10,11,12] Pre-invasion mortality rate prior to 2003 was 5.5 per 1000 per year compared to 13.3 per 1000 in the 40 months post-invasion.[13] The Iraqi people have witnessed to date the painful and terrible consequences of car bombings, mass violence, and military operations.[14] Iraqi children and youth have been so greatly affected by these dire conditions, facing disease, starvation, psychological trauma and death.[15,16]

The objective of the study is to estimate the impact of childhood experiences on self-esteem in adulthood in a sample from Baghdad city. Considering the disastrous and devastative situation that the Iraqi people have endured during the last three decades, there is a real need to study the outcome of these experiences on the personality of Iraqi individuals that might be reflected on their wellbeing.

## METHODS

This cross-sectional study that was designed as a retrospective cohort and was conducted in Baghdad city; the center of Baghdad, the capital of Iraq. Data collection was performed during the period from January 2013 through to January 2014. The target population were male and females between a broad age group of 18-59 years which widened the spectrum and increased the number of end points. Individuals aged 60 years and above 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 to select these. 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 large sector (those containing more than 12 PHCCs) and two from each small sector (with less than 12 PHCCs) through simple random sampling for selection of PHCCs proportionate to the density of its distribution. So, 13 PHCCs from the two main districts of Baghdad city were collected that represent central and peripheral sectors. Each PHCC was visited for two to three weeks to collect data from daily attendants, mostly mothers who brought their children for vaccinations, through a systematic random sampling technique by including every fourth patient seen.

**Universities:** A multistage random sampling technique was adopted by selecting three out of the

five universities that are present in Baghdad. University of Technology, Iraq, Al-Nahrain University and the University of Baghdad were selected. Individual colleges were then selected from each university by a simple random sampling technique, and one grade was also randomly selected from each college. All students of that grade 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 previous or current.
- **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 the WHO[1] and includes categories of household dysfunction and abuse including: psychological abuse; physical abuse; household dysfunction including violence against a mother or other household members; living with household members who are substance abusers, mentally ill or suicidal; imprisonment of a household member; and parental 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; this was measured via questioning subjects if they had been forced to relocate, if a family member or a friend was kidnapped, killed or beaten up by soldiers, police, militia, or gangs.

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

- Family bonding was measured by five modified items derived from an instrument[4,17] and from questions about relationships with parents that were presented in the ACE-IQ.[1] Subjects indicated how much they would like to be the kind of person their parents are/were, how much their parents made them feel trusted, how much they depended on their parents for advice and guidance and how much the parents understood their problems and worries. Responses to questions on family bonding ranged 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".[4]

**Self-esteem assessment**: was measured by the self-esteem scale of Rosenberg.[4] The questions included: at present time; how much they are satisfied about themselves, how much they feel that they have a number of good qualities, how much they feel useless at times, how much they feel that they need respect for themselves. Responses ranged from "strongly disagree" to "strongly agree."

The variables were translated, defined and carefully explained to the respondents to avoid any misunderstanding. In addition, a pilot study was done and thereafter built upon, with some modifications to certain questions, wording and translation considering the item of family bonding and items of self-esteem assessment.

The questionnaire was completed through a direct interview with the respondents after explaining to them the aim of the study.

Due to the sensitive nature of the Iraqi culture, it was decided to avoid any questions that refer to unaccepted norms or trigger social stigma such as 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 and the interview was conducted in a closed room to ensure privacy.

## DATA ANALYSIS

Data entry followed by descriptive and analytic statistics were performed using the IBM Statistical Package for the Social Sciences (SPSS Version 21). The score for family bonding and parental monitoring

was calculated as a single score, considered as a single item of positive childhood experiences.

Standardization scores of household dysfunction-abuse and community-collective violence were calculated for 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 answered 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 provide a universal range for the analysis (all scores were measured from zero to 100).
Quartiles for household dysfunction-abuse, community-collective violence and family bonding scores were calculated (four quartiles for each score). Quartiles were used as they give a better picture of the spread of data when interpreting the results and allow easy comparison between graded quartiles. Cronbach's Alpha reliability of family bonding scale was: 0.86 (strong). Cronbach's Alpha reliability of self-esteem scale was: 0.82 (strong).

Multiple regression model was used to adjust for effects of demographic factors on the association between the cumulative number of categories of childhood exposures and risk factors for self-esteem in adult life.

## RESULTS

A total of 1040 subjects were surveyed and 1000 responded giving a response rate of 96.2%. Respondents age ranged from 18 to 59 years with a mean of 32.08 ± 11.169, females constituted a higher proportion of the study sample (58.3%). Only 18.5% of the participants reported smoking, and 4.2% reported alcohol use (Table 1).

**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 | 96 | 9.6 |
| Total | 998 | 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 | 12 | 1.2 |
| Total | 999 | 100.0 |
| Cigarette smoking | | |
| Non smoker | 814 | 81.5 |
| Ever smoked | 185 | 18.5 |
| Total | 999 | 100.0 |
| Alcohol drinking habit | | |
| Never drank alcohol | 949 | 95.8 |
| Ever drank alcohol | 42 | 4.2 |
| Total | 991 | 100.0 |

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

**Exposure to community violence:** As shown in Table 3, the most common trauma event of community violence reported by 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 (18.1%). A family member or friend having been kidnapped or beaten up by soldiers, police, militia, or gangs were reported in 14.8% of subjects. A family member or friend killed by soldiers, police, militia, or gangs was seen in 17.2%. All items in Table 3 represent a response of sometimes or frequently.

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 at home being yelled at, screamed at, sworn at, insulted or humiliated ......... | 469 | 46.9 |
| Saw or heard a parent or household member at home being slapped, kicked, punched or beaten up ......... | 331 | 33.1 |
| Saw or heard a parent or household member at 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 had threatened to, or actually had abandoned or thrown you out of the house ......... | 137 | 13.7 |
| If a parent, guardian or other household member yelled, screamed, insulted or humiliated you ......... | 387 | 38.7 |
| If a parent, guardian or other household member spanked, slapped, kicked, punched or beaten you ......... | 335 | 33.5 |
| If a parent, guardian or other household member hit or cut you with an object, such as stick, bottle, club, knife, whip ... etc ......... | 162 | 16.2 |
| If bad treatment resulted in injury ......... | 33 | 3.3 |

**Family bonding:** Table 4 shows that 74.8% of subjects would like to be the kind of people their parents are/were, 83.4% felt their parents made them feel trusted, while 77.5% of participants have parents who understandd their problems and needs and 69.2% have parents that spend time talking with them about their daily activities and played with them as a child and during adolescence. All items in Table 4 represent a response of agree and strongly agree.

**Self-esteem as an outcome of resilience:** Table 5 shows the frequencies of ten items that measure self-esteem among the subjects, 82.7% of the participants were satisfied with themselves, 14.9% were inclined to feel a failure, while 28.3% felt useless at times. Frequency distribution of self-esteem items in Table 5 represents agree and strongly agree responses.

**Association between self-esteem and childhood experience:** Table 6 demonstrates that being in the fourth or highest quartile for family bonding is expected to significantly increase the score for self-esteem by a mean of 21.48 compared to subjects

Table 3. Frequency distribution of exposure to community and collective violence items.

| N = 1000 | N | % |
|---|---|---|
| Community and collective violence (age below 15 years) | | |
| Exposed to bullying? | 176 | 17.6 |
| Saw or heard someone being beaten up in real life | 483 | 48.3 |
| Saw or heard someone being threatened with a knife or gun in real life | 181 | 18.1 |
| Forced to relocate | 107 | 10.7 |
| Beaten up by soldiers, police, militia, or gangs | 27 | 2.7 |
| A family member or friend kidnapped or beaten up by soldiers, police, militia, or gangs | 148 | 14.8 |
| A family member or friend killed by soldiers, police, militia, or gangs | 172 | 17.2 |

Table 4. Frequency distribution of the items of bonding to family.

| N = 1000 | N | % |
|---|---|---|
| Bonding to family (age below 15 years) | | |
| Like to be the kind of person parents are/were | 748 | 74.8 |
| Parents made you feel trusted | 834 | 83.4 |
| Parents understand your problems & needs | 775 | 77.5 |
| Parents are depended upon for advice and guidance | 835 | 83.5 |
| Parents encouraged me for going to school | 917 | 91.7 |
| Parents spent time talking with you about school | 805 | 80.5 |
| Parents spent time talking with the participants about activities of the day and spent time for playing and travels | 692 | 69.2 |
| Parents knew the friends of their sons/daughters (participants) | 906 | 90.6 |

within the lowest or first quartile after adjusting other explanatory variables. Being in the third quartile for family bonding is expected to significantly increase the self-esteem score by a mean of 13.19 compared to subjects within the first quartile. Being in the second quartile is expected to significantly increase the self-esteem score by a mean of 6.59 compared to subjects within the first quartile of family bonding after adjusting other explanatory variables.

Being in the fourth quartile for household dysfunction and abuse is expected to significantly decrease the self-esteem score by a mean of −3.042 compared to those within the first quartile for household dysfunction and abuse after adjusting other explanatory variables included in the multiple linear regression models.

University, diploma and higher education are expected to significantly decrease the self-esteem score by a mean of −6.31 compared to those with less than secondary school education.

Parents education show statistically insignificant association with mean score of self-esteem.

$R^2$ for the model was 0.37 which is considered a large effect size.

## DISCUSSION

The aim of this study was to focus on the relationship of ACEs represented mainly by violence within the community and from individuals rather than the relation and interaction between ethnic and cultural groups.

The general unfavorable security condition in Iraq prohibited doing a house-to-house survey, so we chose to collect the sample from PHCCs that represents the lay population of different age groups and university students (the young educated population), as this is an accessible population, and at the same time it is considered representive of a large strata of Baghdad's population.

**Study sample:** females consisted a higher proportion of the sample as they were more commonly seen in

Table 5. Frequency distribution of items of self-esteem.

| N = 1000 | N | % |
|---|---|---|
| Self esteem | | |
| On the whole, I am satisfied with myself | 827 | 82.7 |
| At times, I think I am not good at all | 293 | 29.3 |
| I feel that I have a number of good qualities | 943 | 94.3 |
| I am able to do things as well as most other people | 857 | 85.7 |
| I feel I do not have much to be proud of | 318 | 31.8 |
| I certainly feel useless at times | 283 | 28.3 |
| I feel that I'm a person of worth, at least on an equal plane with others | 923 | 92.3 |
| I wish I could have more respect for myself | 215 | 21.5 |
| All in all, I am inclined to feel that I am a failure | 149 | 14.9 |
| I take a positive attitude toward myself | 895 | 89.5 |

**Table 6. Multiple linear regression model with score of self-esteem (/100) as dependent variable and selected explanatory (independent) variables.**

| | Partial regression coefficient | P | Standardised coefficient |
|---|---|---|---|
| (Constant) | 64.889 | <0.001 | |
| Household dysfunction and abuse score | | | |
| Fourth quartile compared to first (lowest) quartile | −3.042 | 0.047 | −0.076 |
| Third quartile compared to first (lowest) quartile | −2.249 | 0.07[NS] | −0.064 |
| Second quartile compared to first (lowest) quartile | −0.430 | 0.8[NS] | −0.008 |
| Community violence score | | | |
| Fourth quartile compared to first (lowest) quartile | −5.953 | <0.001 | −0.135 |
| Third quartile compared to first (lowest) quartile | 0.062 | 0.97[NS] | 0.001 |
| Second quartile compared to first (lowest) quartile | −0.862 | 0.48[NS] | −0.023 |
| Bonding to family score | | | |
| Fourth quartile compared to first (lowest) quartile | 21.484 | <0.001 | 0.524 |
| Third quartile compared to first (lowest) quartile | 13.193 | <0.001 | 0.337 |
| Second quartile compared to first (lowest) quartile | 6.594 | <0.001 | 0.171 |
| Male gender compared to females | 2.580 | 0.011 | 0.075 |
| Age of the participants | 0.124 | 0.013 | 0.081 |
| Home-owned compared to rented | −0.536 | 0.66[NS] | −0.013 |
| Educational level of study subject | | | |
| University/higher education compared to less than secondary school level | −6.310 | <0.001 | −0.180 |
| Secondary school compared to less than secondary school level | −5.146 | 0.002 | −0.098 |
| Educational level of father | | | |
| University/higher education compared to less than secondary school level | 2.110 | 0.15[NS] | 0.058 |
| Secondary school compared to less than secondary school level | 2.346 | 0.07[NS] | 0.062 |
| Educational level of mother | | | |
| University/higher education compared to less than secondary school level | −1.182 | 0.46[NS] | −0.027 |
| Secondary school compared to less than secondary school level | 0.250 | 0.85[NS] | 0.006 |
| How many of your childhood teachers did you like | 0.973 | 0.19[NS] | 0.037 |

P (Model) $<0.001$, $R^2 = 0.37$

the PHCCs. The same thing was seen for college students, this could be attributed to the general condition of the country which has led to some demographical changes as violence has been a leading cause of death in men between the ages of 15 and 59 years during the period following 2003 invasion,[18] in addition to the migration and displacement of males especially from Baghdad[19] for many reasons particularly the security instability.

## ADVERSE CHILDHOOD EXPERIENCES (ACEs)

**Household dysfunction and abuse:** The experiences ranged from unpleasant acts of conflict such as being yelled at or spanked, to being insulted, threatened, and neglected physically or emotionally as reported in other studies.[20,21]

The results revealed that 10% of the participants lost their fathers when they were less than 15 years old while 2% lost their mothers below that age. This finding might be attributed to the exposure of the Iraqi population to wars and widespread violence for a long period of time,[22,23] and that the majority of deaths occurred in men.[18] The prevalence of emotional abuse (38.7%), physical abuse (33.5%) and exposure of a mother or a household member to violence through verbal (46.9%) or physical punishment (33.1%) is higher than what was reported in an ACE study of the USA population (10.6%, 28.3% and 12.7%) respectively,[24] and lower than that reported in Albania,[25] Peru and in Bangladesh.[26] These differences might be attributed to several factors such as differences in culture, education level, type of personality, economic status, presence or absence of human facilities in addition to differences in the research methodology.

**Community violence exposure:** The most common trauma event of community violence exposure reported by participants was seeing or hearing someone being beaten up in real life, indicating that about half of the participants lived their childhood in a violent environment.

**Association between childhood experiences and self-esteem:** In multiple linear regression, the model explained 37% of self-esteem variance among the participants. The finding is considered as a large effect size. The model demonstrated that family bonding is the most important predictor of building self-esteem among the participants. There was a positive graded relationship between the score for family bonding and the self-esteem score. This finding is consistent with what is reported in the literature as family bonding is one of the important predictors of resilience, and self-esteem is considered an outcome of resilience.[3] The term "bonding" expresses the close and emotional relationship between a child and their parents that provides a safe and secure basis for the child to explore and control the environment, and it shapes a child's understanding and participation in his/her future relationships. Studies have shown a strong relationship between parental bonding style and self-esteem.[27]

The household dysfunction-abuse and community-collective violence exposure were found to have an inverse relationship with the subjects self-esteem indicating that exposure to high levels of violence during childhood erodes the positive sense about the self and world. Many studies have shown that children exposed to violence are at risk of various negative outcomes from childhood to adulthood.[28,29] When there is inter-parental conflict, the children and adolescents are found to show fear, helplessness, low level of self-esteem, depression and poor social behaviors.[30,31] Moreover, being exposed to violence may impair a child's capacity for partnering later in life, continuing the cycle of violence into the next generation.[32]

The third and second quartiles of household dysfunction-abuse and community violence exposure have an insignificant statistical association with the score for self-esteem which reveals that building self-esteem is affected by high levels of violence exposure however, participants could deal properly with low levels of violence as a process of resilience.

## LIMITATIONS OF THE STUDY

The current condition of security instability in Iraq has limited the movement of the researchers regarding the process of data collection.

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 leading to either over or under reporting by interviewees.

Due to the sensitive nature of the Iraqi culture, the study included questions that may have been considered embarassing or may have stimulated some

sad memories, and the subjects may not have been able to disclose them accurately.

## CONCLUSION

Family bonding during childhood seems to play an important role that is associated with building self-esteem during adulthood, while exposure to household dysfunction-abuse during childhood has a negative association with self-esteem. These findings shed further light on the essential role of childhood experiences in building self-esteem and the adaptation process of individuals later on in life. A national health program is suggested for targeting early ACEs to help prevent or at least dilute their consequences.

## REFERENCES


1. WHO. Adverse Childhood Experiences International Questionnaire (ACE-IQ). http://www.who.int/violence_injury_prevention/violence/activities/adverse_childhood_experiences/en/. (accessed March 3, 2014).
2. Duke NN, Pettingell SL, McMorris BJ, Borowsky IW. Adolescent violence perpetration: Associations with multiple types of adverse childhood experiences. *Pediatrics*. 2010;125:778 – 786.
3. Sowislo FJ, Orth U. Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*. 2013;139(1):213 – 240.
4. Tiet QQ, Huizinga D, Byrnes FH. Predictors of resilience among inner city youths. *J Child Fam Stud*. 2010;19:360 – 378.
5. Self-Brown RS. Effects of family violence and parental psychopathology on the psychological outcome of urban adolescents exposed to community violence. PhD Thesis, Psychology, University of West Florida, 2004.
6. WHO 2014. Child maltreatment. Fact Sheet No.150.
7. CDC 2014. Adverse Childhood Experiences Study (ACE). Centers for Disease Control and Prevention. http://www.cdc.gov/ace/ (accessed February 2014).
8. Clark M. The family and substance use among Maltese University students. *Journal of Educational and Social Research*. 2012;2(3).
9. Orbke S, Smith LH. A developmental framework for enhancing resiliency in adult survivors of childhood abuse. *Int J Adv Counselling*. 2012, DOI 10.1007/s10447-012-9164-6.
10. Fearson JD. Iraq's civil war. *Foreign Affairs*. 2007;86:2 – 16.
11. Al Shawi AF, Al-Hemiary NF, Al-Diwan JK, Tahir DH. Post-traumatic stress disorder among university students in Baghdad: A preliminary report. *Iraq J Comm Med*. 2011;24:287 – 290.
12. Al Hilfi K, Lafta R, Burnham G. Health services in Iraq. www.thelancet.com; 2013, Vol 381, March 16, 939-48.
13. Burnham G, Lafta R, Doocy S, Roberts L. Mortality after 2003 invasion of Iraq: A cross sectional cluster sample survey. *The Lancet*. 2006;6736(06):69491 – 69499.
14. Afram TZ. Posttraumatic stress disorder among the staff of causality departments in Mosul city. A fellowship Thesis, Iraqi Board for Medical Specialization, 2007.
15. Al-Jawadi A, Abdul-Rhman S. Prevalence of childhood and early adolescence mental disorder among children attending primary health care centers in Mosal, Iraq: A cross-sectional study. *BMC*. 2007;7:274 – 282.
16. Dyregrov A, Gjestad R, Raundalen M. Children exposed to warfare: A longitudinal study. *J Trauma Stress*. 2002;15:59 – 68.
17. Lagrange RL, White HR. Age differences in delinquency: A test of theory. *Criminology*. 1985;23:19 – 45.
18. Al Khuzai HA, Ahmed JI, Mohammed J, Iraqi Family Health Service Survey Group. Violence related mortality in Iraq from 2002-2006. *N Engl J Med*. 2008;358:484 – 493.
19. Al Khalisi N. The Iraqi medical brain drain: A cross-sectional study. *International Journal of Health Services*. 2013;43(2):363 – 378.
20. Nguyen TH, Dunne DP, Vu Le N. Multiple types of child maltreatment and adolescent mental health in Viet Nam. *Bulletin of the World Health Organization*. 2010;88:22 – 30, DOI 10.2471/BLT.08.060061.
21. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) study. *American Journal of Preventive Medicine*. 1998;14:245 – 258.
22. AlHasnawi S, Sadik S, Rasheed M, Baban A, Al-Alak MM, Othman AY, Othman Y, Ismet N, Shawani O, Murthy S, Aljadiry M, Chatterji S, Al-Gasseer N, Streel E, Naidoo N, Ali MM, Gruber MJ, Petukhova M, Sampson NA, Kessler RC. The prevalence and correlates of DSM-IV disorders in Iraq Mental Health Survey (IMHS). *World Psychiatry*. 2009;8:97 – 109.

23. Al Shawi AF, Al-Diwan JK, Al Nuaimi AS. Exposure to violence and complex post-traumatic stress symptoms among university students in Baghdad: A preliminary report. *Iraq J Comm Med*. 2013;26:192–194.

24. CDC. Health Appraisal Questionnaire. Centers for Disease Control and Prevention. www.cdc.gov/ace/pdf/haqmweb.pdf (accessed March 15, 2014).

25. WHO. Community survey on prevalence of adverse childhood experiences in Albania, 2013. Download from http://www.euro.who.int/__data/assets/pdf_file/0016/181042/e96750.pdf (accessed March 20, 2014).

26. Hidrobo M, Fernald L. Cash transfers and domestic violence. *Journal of Health Economics*. 2013;32:304–319.

27. Bahreini M, Akaberian S, Ghodsbin F, Yazdankhah FM, Mohammadi BM. The effects of parental bonding on depression and self-esteem in adolescence. *Journal of Jahrom University of Medical Sciences*. 2012;10(1):6–10.

28. Salami OS. Moderating effect of resilience, self-esteem, and social support on adolescents' reactions to violence. *Asian Social Science*. 2010;6(12).

29. Thompson E, Trice-Black S. School-based group interventions for children exposed to domestic violence. *J Fam*. 2012;27:233–241.

30. Esfandyari B, Baharudin R, Nowzari L. Background of inter-parental conflicts and internalizing behaviour problems among adolescents. *European Journal of Scientific Research*. 2009;37:599–607.

31. Herrenkohl TI, Kosterman R, Hawkins JD, Mason WA. Effects of growth in family conflict in adolescence on adult depressive symptoms: Mediating and moderating effects of stress and school bonding. *Journal of Adolescent Health*. 2009;44:146–152.

32. Finkelhor D, Turner H, Ormrod R, Hamby S, Kracke K, National Survey of Children exposure to Violence. US Department of Justice, Office of Juvenile Justice 2009. Available online at http://www.ojp.usdoj.gov