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Research Article

# Impact of Psychological Problems and Marital Adjustment of Iranian Veterans on Their Children's Quality of Life and Happiness

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**Background:** The Iran-Iraq war during the 1980-1988 has left many consequences on veterans and their families that persist long after the war ended.

**Objectives:** The aim of this study was to evaluate the impact of psychological problems and marital adjustment of Iranian veterans on their children's quality of life and happiness 24 years after the war ended.

**Patients and Methods:** The sample was all children of veterans in Isfahan city that registered by Veterans and Martyrs Affair Foundation (VMAF). One hundred sixty-three veterans were selected by systematic randomized sampling and the symptom checklist-90-revised (SCL-90-R) and dyadic adjustment scale (DAS) were administered for them. Their wives filled out the DAS and their children answered to World Health Organization Quality of Life-Brief version (WHOQOL-BREF) and Oxford Happiness Inventory (OHI). The data from questionnaires completed by 149 families were analyzed using the multiple regressions analysis.

**Results:** Global Severity Index (GSI) scores of veterans and veteran's age were inversely correlated with the scores of children's quality of life, while marital adjustment of parents and number of rooms in house were positively correlated. Mother's age was inversely correlated with the scores of children's happiness, while marital adjustment of the parents, the number of rooms in their house and the number of children were positively correlated.

**Conclusions:** In veterans' family, psychological health of the veterans and marital adjustment of the parents have a significant relationship with their children's quality of life and happiness.

**Keywords:** Marital Status; Adjustment; Veterans; Quality of Life; Happiness

## 1. Background

War has a far-reaching impact on the soldiers' health and well-being, war veterans and victims (1). One study showed that half of the Iranian veterans were diagnosed with borderline or serious psychopathology (2). Exposure to combat can lead to disabling symptoms that present not only in the veteran but that can be transmitted to persons close to him or her such as partners, children, and friends (3). Some veterans have been damaged in several areas of family functioning such as family cohesion; parental satisfaction and couple relationship (4). Several studies have examined the effect of fathers' combat-related, violent behaviors on their children (5, 6) and poorer parent-child communication and affective involvement (7, 8). Kalantari (9) remarked that "the father's disability prevents proper communication with the children". Results have generally revealed that children of veterans with post-traumatic stress disorder are at higher risk for behavioral, academic, and interpersonal problems (10). Studies showed that the majority of veterans' children experience disturbances in areas of mental health; including a decrease in happiness and life satisfaction (11). They have elevated scores of depression, tension, apprehen-

sion, and anxiety (12) that show weaker mental quality of life. Also, studies on Iranian veterans with psychiatric problems have shown that their children have low quality of life, especially in mental aspect (13, 14). But another study suggests that there are no significant differences between the scores of veterans' children and those of non-veterans on both the hope and happiness scales (15). On the other hand, soldiers who were exposed to combat situations have high levels of marital dissatisfaction (16) and poor communication and intimacy with their wives (17, 18). Studies in Iranian veterans showed that lower GSI in SCL-90-R is consistent with higher scores in marital adjustment (19, 20). The quality of the relationship affects the parenting behavior of both parents (21). Studies have shown that marital satisfaction of parents has got considerable influence on adjustment, happiness and quality of life of children (22-25). Overall, psychological status and marital satisfaction of parents affect their child's well-being (26). Phenomenology of intergenerational transmission of war-related trauma and also intervention programs for detoxification of this trauma in the next generation have been a focus of attention in

many studies (27, 28). Now, 24 years after termination of the imposed war against Iran, it seems very important to evaluate the most expected mental health problems in children of war veterans- that some of them married themselves- in order to plan more targeted interventions to detoxify the society of war-related traumas.

## 2. Objectives

Therefore, the aim of this study was to evaluate the quality of life and happiness in children of war veterans.

## 3. Patients and Methods

### 3.1. Design and Data Collection

The study population was all the veterans that registered by Veterans and Martyr Affair Foundation (VMAF) of Isfahan until 2011. One hundred sixty-three veterans and their wives and one of their children selected randomly using a list that was prepared by VMAF of Isfahan for veterans rated above 25 percent severe injuries from three areas of the Isfahan city. Veterans filled out the symptom checklist 90-revised (SCL-90-R). They also filled out the DAS with their wives. Moreover, the World Health Organization Quality of Life-Brief version (WHOQOL-BREF) and Oxford Happiness Inventory (QHI) were conducted on the veterans' children. All the questionnaires were filled out by 149 families. The total score of all these instruments was entered into the multiple regression analysis.

### 3.2. Demographic Data

Veterans' age, level of education, age of injury, duration of injury, percent of injury, type of injury and the age and education level of the veterans' wives, their number of children, and number of rooms in their house were recorded.

### 3.3. The Symptom Checklist-90-Revised (SCL-90-R)

The SCL-90-R included 90 items to assess psychological symptoms (29). The scale has been normalized in Iran (30). This questionnaire measures nine scales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychotic. The test has a global severity index (GSI) that is calculated by dividing the total score on the 90 questions derived. The range of GSI is between 0 and 4. Score higher than 2 shows psychopathology (29). The SCL-90-R has exhibited high levels of reliability in several studies (30).

### 3.4. Dyadic Adjustment Scale (DAS)

The purpose of this measure is to assess the quality of the marital relationship or similar duet relationships (31). The test has 32 questions in four sections: dyadic satisfaction, dyadic cohesion, dyadic consensus, affection expression. Dyadic satisfaction shows the level of hap-

piness in the relationships and conflicts experienced by the couples. Dyadic cohesion represents collaborative activities between couples. Dyadic consensus shows that the couple agreed on the important issues such as managing finances or important decisions. Affection expression is related to how often the couples express their love to each other. The scale has been reported to have a high reliability in Iranian subjects (32).

### 3.5. World Health Organization Quality of Life-Brief Version (WHOQOL-BREF)

Quality of life is defined as individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (33). WHOQOL-100, as an instrument based on this conceptual framework, was concurrently developed across several countries and cultures while retaining its similar psychometric properties and structure (34). A 26-item, short form of this instrument (WHOQOL-BREF) was developed for pragmatic reasons and has been shown to have similar psychometric properties to the WHOQOL-100 (34). All items were rated on a five-point scale, and the domain scores were calculated according to the formula provided in the user's manual, with a possible range of 4-20; the higher the score, the better the QOL (35). World Health Organization has reported reliability of Quality of Life Scale in 15 international centers, so that the Cronbach's alpha coefficients for the four subscales and the total scale of QOL has been reported between 0.73 to 0.89 (36). Quality of Life Questionnaire in the Iranian population has high validity. The ability of this tool to differentiate between the healthy and patient groups has reported favorable. The Cronbach's alpha reliability coefficient for WHOQOL-BREF was 0.84 in an Iranian population (37).

### 3.6. Oxford Happiness Inventory (OHI)

OHI is a 29-item questionnaire measuring the general psychological causes of happiness including its main components: achievement and satisfaction, enjoyment, vigor and health. It has demonstrated a test-retest reliability correlation coefficient of 0.87 and an alpha of 0.93 (38). The Oxford happiness questionnaire has high correlation with the scores from friends assessment and personality dimensions. Also scores of OHI are highly correlated with stress and social support (39). A study of cross-cultural validity and reliability of the Oxford Happiness Questionnaire among English, American, Canadian and Australian students is obtained 0.89 to 0.9 (40). In Iran, Oxford Happiness Questionnaire has been translated into Persian and its correct translation is confirmed by eight specialists. Formal validity of the questionnaire has been confirmed by dozens of experts. The reliability of the questionnaire in Iranian students has been reported between 0.92 and 0.98 (38).

### 3.7. Data Analysis

Data analysis included descriptive and inferential statistics were performed using SPSS, version 16.0. Categorical variables are presented as frequencies and percentages, while continuous variables are presented as mean  $\pm$  standard deviation. The total score of all questionnaires and socio-demographic characteristics entered into the analysis. Stepwise multiple linear regression analysis was used to assess the correlates of the children's QOL and happiness with the total score of all questionnaires and socio-demographic characteristics.

## 4. Results

Table 1 summarizes the characteristics of veterans and their wives (fathers and mothers of children). The ages of the 149 participants (veterans' children) ranged from 13 to 35 years, with the mean age of  $15.61 \pm 4.74$  years. Ninety-four cases (57.6%) were girl and 69 (43.4%) were boy.

The results of multiple linear regression models to analyze predictors of the quality of life are shown in Table 2. The GSI scores of veterans and veteran's age were inversely correlated with scores of children's quality of life, while the marital adjustment of parents and number of rooms in house were positively correlated with SF-26 of the children, with standardized beta coefficients of -0.24, -0.17, 0.29 and 0.16, respectively.

Regression equation with the variables in Table 2 as follows:

Score of quality of life in veterans' children = .164 (total scores of parents in marital adjustment scale) -3.510 (GSI scores of father) + 4.042 (number of rooms in house) -383 (veteran's age) + 78.132.

The results of multiple linear regression models to analyze the predictors of the happiness in veteran's children are shown in Table 3. Mother's age were inversely correlated with scores of children's happiness, while marital adjustment of the parents, the number of rooms in their house and number of children were positively correlated with QHI of the children, with standardized beta coefficients of -0.24, -0.29, 0.16 and 0.17, respectively.

Regression equation with the variables in Table 2 as follows:

Score of happiness in veterans' children = 0.178 (total scores of parents in marital adjustment scale) -0.644 (mother's age) + 3.883 (number of rooms in house) + 5.502 (number of children) + 32.73.

**Table 1.** Distribution of War Veterans and Their Wives According to Their Demographic Characteristics <sup>a</sup>

Variable	Results
<b>Age of father, veteran</b>	45.64 $\pm$ 5.35
<b>Age of injury</b>	22.03 $\pm$ 5.57
<b>Duration of injury</b>	23.89 $\pm$ 4.15
<b>Age of mother</b>	40.43 $\pm$ 5.64
<b>Educational level of veterans</b>	
Primary school	33 (22.1)
Junior school	25 (16.8)
Senior school	50 (33.6)
$\leq$ Bachelor	34 (22.8)
<b>Percent of injury, %</b>	
25-35	48 (32.2)
36-45	33 (22.1)
46-55	31 (20.8)
56-65	16 (10.7)
> 65	17 (11.4)
<b>Type of injury</b>	
Chemical	6 (4.0)
Mental	15 (10.1)
Spiral	9 (6.0)
Somatic	46 (30.9)
2 types of injury	54 (36.2)
More than 2 types of injury	19 (12.8)
<b>Educational level of mother</b>	
Primary school	58 (38.9)
Junior school	45 (30.2)
Senior school	40 (26.8)
$\leq$ Bachelor	2 (1.3)
<b>Number of children</b>	
$\leq$ 1 child	2 (1.4)
2-3 children	115 (77.2)
$\leq$ 3 children	31 (20.8)
<b>Number of rooms in the house</b>	
1 room	19 (12.8)
2 rooms	91 (61.1)
3 rooms	32 (21.5)
> 3 rooms	1 (0.7)

<sup>a</sup> Data are presented as Mean  $\pm$  SD or No. (%).

**Table 2.** Scores of Multiple Linear Regression Model for Correlates of Quality of Life in Veterans' Children

	Estimate, B	Standardized Estimate, $\beta$	t	P Value	R <sup>2</sup>	$\Delta$ R <sup>2</sup>
<b>Constant</b>	78.132		9.357	0.001		
<b>Marital adjustment of parents</b>	0.164	0.296	3.435	0.000	0.165	0.160
<b>GSI scores of veterans</b>	-3.510	-0.248	-2.638	0.002	0.206	0.196
<b>Number of rooms in house</b>	4.042	0.166	2.331	0.026	0.226	0.211
<b>Veteran's age</b>	-0.383	-0.171	-2.053	0.027	0.246	0.227

**Table 3.** Scores of Multiple Linear Regression Model for Correlates of Happiness in Veterans' Children

	Estimate, B	Standardized estimate, $\beta$	t	P Value	R <sup>2</sup>	$\Delta$ R <sup>2</sup>
<b>Constant</b>	32.730		3.377	0.001		
<b>Marital adjustment of parents</b>	0.178	0.296	4.023	0.000	0.115	0.109
<b>Mother's age</b>	-0.644	-0.248	-3.218	0.002	0.143	0.133
<b>Number of rooms in house</b>	3.883	0.166	2.240	0.026	0.164	0.149
<b>Number of children</b>	5.502	0.171	2.238	0.027	0.190	0.169

## 5. Discussion

This study showed that the Global Severity Index (GSI) scores in veterans (children's fathers) had a negative correlation with children's quality of life (QOL). In other words, for quality of life of the veterans' children, the more GSI scores of their fathers in SCL-90-R they had the lower QOL scores. Studies have shown the importance of parental subjective health status, along with other variables, as a significant factor for the health-related quality of life (HRQoL) in children (41). Quality of life has the physical, psychological and social relationships domains. Parental psychological problems is associated with multiple indicators of poor child outcome, including social and academic impairment, overall poor psychosocial adjustment, an increased risk for the development of psychopathology and low quality of life, especially in mental aspect (5, 6, 10, 13, 14). Our study showed that the veteran's age was inversely correlated with scores of children's quality of life. On the other hand, mother's age were inversely correlated with scores of children's happiness. The age of the parents may have effects on parent involvement with their children and their quality of life and happiness (25, 41). The study showed that marital adjustment of the parents was positively correlated with children's quality of life and happiness. Studies have shown that marital satisfaction of the parents has got considerable influence on adjustment, happiness and quality of life of children (22-25). It seems that marital adjustment of the parents in the families of veterans is affected by psychological health of veterans. Soldiers who were exposed to combat situations have a high level of marital dissatisfaction (16, 19, 20) and poor communication and intimacy with their wives (17, 18). The study also showed that the number of rooms in the house was positively correlated with the children's quality of life and happiness. Finally, the number of siblings that the children have was negatively correlated with children's happiness. These findings are related to socioeconomic status (SES) of the families. Lower family income and SES have been clearly linked to poorer health and quality of life in children (42). This finding appears to be affected by mental status of veterans too. Research shows that the socioeconomic status in Iranian veterans with psychiatric problems is weaker than other veterans (43). It appears that all the above-mentioned findings

are related together and parental involvement is the common influential factor between all the variables. This means that all variables included the psychological health of father (veteran), marital adjustment of the parents, parental age and the number of children have effects on parental involvement in children. Further it seems that father involvement is the most important factor. Father involvement can affect both mother and children happiness and well-being. In veterans, father involvement disturbed, so that having a veteran father with post-traumatic stress disorder is associated with poorer parent-child communication and affective involvement (7, 8). This study showed that the quality of life and happiness in veteran's children is inversely correlated with parental age, father psychological health, the number of siblings and the number of rooms in their house. In addition, marital adjustment of the parents was positively correlated with children's quality of life and happiness. Limitations of this study include given that veterans and their families were invited to implementation of questionnaires, only veterans who attended had a good physical condition. Also, since the study was correlational, those questionnaires were analyzed who were filled out by both parents and their children. In conclusion, this study showed that the mental status, marital adjustment and socioeconomic status of veterans had a significant effect on their children's quality of life and happiness. These findings show the importance of the psychological interventions in mental health and marital areas for the veterans and their spouses. Furthermore, an improvement of socioeconomic status of veterans could help to increase the quality of life and happiness of their children.

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