

## *Original Article*

# **Aggression, Anxiety, and Social Development in Adolescent Children of War Veterans with PTSD Versus those of Non-Veterans**

**Gh. Ahmadzadeh MD\*, A. Malekian MD\*\***

## **ABSTRACT**

**Background:** Evaluation of psychological problems in children of war veterans with PTSD can be the first step in improving the war – related trauma and interrupting the known phenomenon of transgeneration transmission of this trauma.

**Methods:** Using three self – administered questionnaires, this study was carried out to compare aggression, anxiety, and social development (as some of the most expected mental health problems in this group according to literature) in adolescent children of war veterans and those of non-veterans. The two groups were matched regarding sex, academic achievement, stage of education, and economic status of the family.

**Results:** After controlling the level of parental education (as a confounding variable), a higher rate of aggression and anxiety was found in adolescent children of war veterans with PTSD but the two groups showed no significant difference in social development.

**Conclusion:** The higher rate of anxiety and aggression among children of war veterans with PTSD along with many other factors such as low socioeconomic status in this group signifies the importance of mental health screening programs and appropriate interventions in this group.

**Key words:** Aggression, Social Development, Anxiety, War Veterans, PTSD, Adolescent.

Children of war veterans with post traumatic Stress Disorder (PTSD) are the subjects of indirect war-related trauma because of their conscious knowledge of their fathers' combat experience and also their unconscious over-identification with their fathers<sup>1</sup>. On the other hand, because of their repeated exposure to episodic rage, aggression, and violent behaviors by their fathers<sup>2</sup>, they are subjects of chronic traumatic stresses and this in turn works as an additional risk factor in the transmission of PTSD from parent to child<sup>3</sup>. 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 all over the world<sup>4-8</sup>. There has been an emphasis on the high prevalence of the same symptoms of the veterans (mostly aggression and anxiety) in

the next generation<sup>1,9</sup>. From the family standpoint, literature indicates that mental problems in the returned veterans, make it difficult or even impossible for them to resume their former roles as fathers<sup>7</sup>completely. In a dysfunctional family in which father's figure is defective or absent, impairment of social development of the children is a known important consequent<sup>10</sup>. Now, 13 years after termination of the imposed war against Iran, it seems very important to evaluate the most expected mental health problems in the offsprings of war veterans with PTSD in order to plan more targeted interventions to detoxify the society of war-related traumas. This study is therefore aimed to evaluate aggression, anxiety, and social development in children of war veterans with PTSD.

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\*Associate Professor, Department of Psychiatry, Isfahan University of Medical Sciences, Isfahan, Iran.

\*\*Resident, Department of Psychiatry, Isfahan University of Medical Sciences, Isfahan, Iran.

Correspondence to: Dr Azadeh Malekian, Noor Medical Center, Behavioral Sciences Research Center, Isfahan, Iran.  
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## Materials and Methods

This was a cross-sectional study in which 141 high school student children of war veterans (whose fathers suffered moderate to severe chronic PTSD and otherwise, did not suffer any significant disability or injury) were compared with 141 high school students whose fathers were not veterans. Selection of the first group was done by studying medical and family files of war veterans with PTSD, which is kept in Isfahan war veterans' office and their specialized psychiatric clinic. The second group was selected through stratified random sampling in Isfahan high schools. The two groups were also matched regarding their families' economic status, their last average of academic scores, and their grade in high school (table 1). Participants completed three self-administered questionnaires measuring aggression (Aggression Questionnaire=AGQ)<sup>11</sup>, anxiety (Cattle's Anxiety Scale)<sup>12</sup>, and social development (Whitzman's Standardized Scale for Social Development)<sup>13</sup>. Validity and reliability of all three mentioned scales have been confirmed through previous studies in Iranian population<sup>11-14</sup>. In addition, participants completed a form of demographic data, including sex, age, grade in high school, family salary (classified to three ranges) and the level of parental education (classified to three levels for each parent). The student could not enter the study if any of the following conditions were present: history of a major mental disorder in mother, history of direct exposure to war trauma or any other severe non war-related trauma, any significant neurological or mental disorders such as mental retardation, seizure and any other chronic or severe disease. These data were obtained from the family files of war veterans and school files of the second group (direct interview with mother or student completed the information, wherever was needed).

Data were presented as mean  $\pm$  SD or n (%) where appropriate. Means of aggression, anxiety, and social development scores were compared between the two groups using Student t test. For controlling the effect of parental educational level (as a confounding variable), stratified analysis and multiple regression model were used. The sample size was calculated according to the scores of aggression questionnaire (which had the high-

est variance among the three variables of the study). Considering the power of the test (80%), standardized difference (45%), and a significance level of 0.05, the sample size in each group was calculated to be 141. Data analysis was done using SPSS 9 software.

## Results

From 282 students who participated in the study, 152 (53.9%) were female and the others (46.1%) were male with a same number in each group. Two groups showed significant differences in the average scores of aggression, and anxiety ( $P < 0.05$ ) but showed no significant difference in social development level (table 2).

Analyses showed a lower level of parental education in the first group (war veterans' children) ( $P < 0.05$ ). Furthermore, social development showed a direct relation with the level of parental education in both groups ( $P < 0.05$ ).

In the second group, aggression and anxiety also showed a reverse relation with level of parental education. Since parental education was considered a confounding variable, stratified analysis and multiple regression models were used to control its effects. These analyses showed that average score of aggression in the veterans' children group were significantly higher than the comparison group in all levels of parental education. Also, except for the lowest level of parental education, average scores of anxiety were significantly higher in the war veterans' children than the comparison group ( $P < 0.05$ ). After controlling the effect of parental education, the two groups showed no significant difference in social development. Results of multiple regression model analysis confirm those findings. According to this model, although maternal educational level had a reverse relationship with adolescents' aggression and anxiety, but the measures of these two variables, independent of maternal educational level, still differs according to the study group. Multiple regression models showed no relationship between social development and the study group.

## Discussion

This study showed a higher rate of aggression among adolescent children of war veterans with PTSD compared with children of non-veterans.

This result is consistent with studies of the second generation of the PTSD afflicted survivors of world war II<sup>3, 9</sup>, Vietnam war<sup>3, 8</sup>, holocaust survivors<sup>1</sup>, and Croatia war<sup>15</sup> among many other studies.

The higher rate of anxiety among adolescent children of war veterans with PTSD is also harmonious with literature<sup>1, 3, 4, 5, 16</sup>. Contrary to our expectations, no significant difference was found between the social development scores for any offspring group. Although studies have shown that social development can be impaired in children whose fathers' role in the family is somehow defective or damaged<sup>10</sup>, in this study social development of the offsprings was not the area in which the effect of the veterans' PTSD appears to manifest itself. More detailed studies may be necessary in this area.

The higher rate of anxiety and aggression among children of war veterans, as the continuing legacy of war time trauma and also noteworthy undesirable socioeconomic status observed in this group, signifies the urgent necessity of further efforts to support the families of veterans with PTSD and to plan systematic intervention programs to discontinue the transgeneration transmission of war trauma.

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**Table 1.** Characteristics of participants in the study. Data are presented as mean ± SD or n (%).

		Children of war veterans	Children of non-veterans	P value
Age (year)		17.2 ± 0.6	16.9 ± 0.6	0.65
Sex	Male	65 (46.1)	65 (46.1)	0.98
	Female	77 (54.6)	75 (53.2)	
MAAS		16.56 ± 7.21	16.79 ± 8.13	0.74
FMI	<100000	25 (17.7)	27 (19.1)	0.86
	100000-200000	98 (69.5)	96 (68.0)	
	>200000	18 (12.7)	18 (12.7)	
High School Grade	1st	35 (24.8)	34 (24.1)	0.91
	2nd	36 (25.5)	36 (25.5)	
	3rd	32 (22.7)	32 (22.6)	
	4th	39 (27.6)	38 (26.9)	

MAAS = Mean Academic Achievement Score, FMI = Family Monthly Income

**Table 2.** Comparison of aggression, anxiety and social development scores between two groups. Data are presented as mean ± SD.

	Children of war veterans	Children of non-veterans
Aggression*	59.6 ± 13.7	45.5 ± 13.8
Anxiety*	54.5 ± 10.1	45.3 ± 12.9
Social development	10.5 ± 3.1	11.5 ± 2.6

\* P < 0.05

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