Chapter VII

SUMMARY AND CONCLUSIONS
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As a result of conflicting opinions among the political leaders of nations, usually neighbours, wars are thrust and inflicted on the peace-loving citizens, even when they are against them.

The loud war-cries, tinged with religious colour, mistaken loyalties, and war propaganda create an atmosphere of hatred towards an unseen enemy whose hand you would have gladly shaken in the street but for the whipped up hatred by political leaders. They incite in people a madness to kill, destroy and fight to a finish to achieve selfish goals because they are ego-maniacs. In the beginning these war activities appear interesting to hear and to watch. It makes the old, cold-blooded, worn out people get warmed up and makes the fresh young blood rush to join the army. The inevitable result is bloodshed and destruction, particularly of the young, for in times of peace the young bury the old; in times of war, the old bury the young. Civilization and culture, which are the final flowering of human history are destroyed, sometimes beyond repair.

When a soldier breathes his last — quickly, if he is lucky — the war-record office, to which he is only a number,
rounds it off and forgets him. The record office does not replace a devoted son, affectionate brother, loyal husband and sincere friend. An amount of money or a pension to the surviving members of his family is no compensation for a precious life sacrificed for nothing.

Now-a-days wars are not fought on the battlefield only. Once a war is declared, then it will be a "total war". The icy hands of death will not spare even the citizens who are far away from the frontline. Besides making orphans of thousands of innocent happy families, the unkind war will cripple not only soldiers but also the civilian population that is tombed. It is pathetic to see the war-victims who have lost their eyes, hands and legs limping about with their mutilated bodies. The agony of death is for only once, but to these injured, crippled persons the agony of suffering physically and psychologically is for ever. The injured and disabled cannot stand on their own. They become parasites and most of them are dependent on others. Having lost their dependence, the general comfort and emotional support they become a liability to society and may become revengeful, that is, less than human beings.

As isolated unwanted citizens, they may develop an inferiority complex, fear of ruthlessness which at times will be dangerous to the family or the society.
The "dead" do not appear and living war-victims do not tell their complete tales. Neglected by the public, incorrectly or improperly resettled in their life after the war, these hapless victims of war go on cursing endlessly the patronisers of legal violence. At times they prefer to suffer silently, to uphold the honour of their country. Alas! The country quickly forgets their noble deed till the start of another war.

A dead soldier is, in a sense, luckier than a soldier who is wounded and survives. The dead soldier leaves no doubt an unfilled vacuum in the hearts of his near ones, but he is at least free from the traumas of being wounded seriously, and then surviving, or from the stresses of participating in a war. For participation in combat places soldiers under intense pressures that can impair their functioning. The most common and conspicuous long-term reaction to massive stress has been termed post-traumatic stress disorder (PTSD). According to the American Psychiatric Association (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM-III, 1980), post-traumatic stress disorder is indicated by the "development of characteristic symptoms following a psychological traumatic event that is generally outside the range of usual human experience" (APA, 1980, p. 236). Typical symptoms of the disorder include reexperiencing the traumatic event, numbing of responsiveness to, or reduced involvement with the external
world, and a variety of autonomic dysphoric, or cognitive symptoms. Any individual exposed to a major traumatic event (e.g., rape, natural disaster, war) may develop this condition immediately or after a delay in time. Combat stress may have long-lasting effects that leave the soldiers as well as civilians emotionally vulnerable for an extended period of time. Although in some cases emotional balance is restored with the end of a war, in others profound and prolonged mental health sequelae in the form of post-traumatic stress disorder (PTSD) ensue.

An understanding of how soldiers as well as civilians are affected by combat conditions is important because society has a responsibility to care for its civilians and military veterans and to aid their adjustment following service-connected mental-physical injury.

PTSD can be assessed today by clear, standardized criteria provided by the DSM-III. But one should be most careful in making generalizations about PTSD as a uniform phenomenon. The psychiatric response to stress varies not only with different types of stressors but also with different populations that experience similar stressors. Since this limitation was recognized, numerous symptoms that were often observed in some forms of PTSD but not in others were listed
in the DSM-III as "frequently associated features". They are not defined as necessary criteria for the diagnosis of PTSD. These symptoms include anxiety, depression, and symptoms that are highly prevalent among Vietnam veterans, such as irritability accompanied by an explosive outburst of anger.

The present study aimed to delineate the characteristic expressions of combat-related PTSD among Iranian population in Iran-Iraq war. An attempt was made to evaluate the clinical picture of four groups of war-affected Iranian population, and an attempt was also made to examine the relationship between PTSD and psychiatric symptomatology in four matched groups.

The present study addressed itself to answer important research questions that were raised:

1. What are the psychiatric expressions of combat-related PTSD in the sample of matched groups?

2. What is the extent of PTSD in terms of the number of persons suffering in the sample of matched groups?

3. What is the relationship between PTSD and psychiatric symptomatology?
4. What is the influence of age, sex, marital status, education, occupation, family and social support, familial record of psychopathology, pre-war visit to psychiatrist, etc., on PTSD of sample of matched groups?

To seek answers to the above questions, the sample was selected from the Tehran city of Iran. All the sample sub-groups were selected randomly. The sample size was 400 belonging to four groups:

1. The family member of military personnel who had been martyred in battle (i.e., father, mother, and spouse) 100 persons from this group,

2. Another 100 subjects of normal persons in war-affected area who did not fall in any of the other three groups,

3. 100 frontline soldiers who at least for six months had participated in war and had been wounded, and

4. Another group of 100 soldiers who at least for six months had participated in war but not injured (i.e., non-injured soldiers).

The first and second group (i.e., family and martyr group and normal population group) were matched for
socio-demographic factors like age, sex, education, economic status. And the third and fourth group (i.e., injured and non-injured group) were matched for age, education and economic status.

Apart from the PTSD questionnaire, based on DSM-III-R version, the symptom checklist-90-Revised (SCL-90-R) was also used. The SCL-90-R checklist was used after adopting it to the Iranian population. It has been used earlier by many researchers and proved to be very effective. The SCL-90-R is composed of 90 self-report items rated on a 5-point distress scale. The SCL-90-R was chosen for the present study because it allows for the assessment of general breadth and severity of symptomatology, the assessment of nine problem areas (Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism).

An attempt was made to assess the psychiatric symptomatology of the sample of matched groups (i.e., family of martyr group and matched control group, i.e., normal population group and injured and non-injured soldier group). Subjects in study groups were compared on three global symptoms measures that gauge the extent and severity of psychiatric symptomatology, as well as on each of the nine SCL-90-R subscales. The
means, standard deviations and F-ratios of each SCL-90-R measure were computed according to study groups. One-way analysis of variance (ANOVA) revealed significant differences between family of martyr group and matched control group (i.e., normal population group) on all the three global symptoms measures. In addition, univariate ANOVA of each of the nine symptoms dimension of SCL-90-R indicated significant difference between study groups for seven dimensions, viz., Somatization (SOM), Obsessive-Compulsive (OC), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobic Anxiety (PHOB) and Psychoticism (PSY). There were no significant differences on Interpersonal Sensitivity (IS) and Paranoid Ideation (PAR), between the family of martyr group and matched control group (i.e., normal population group).

One-way analysis of variance (ANOVA) also revealed the significant differences between injured and non-injured soldier group on the Global Severity Index (GSI) and Positive Symptom Total (PST). But there were no significant differences on Positive Symptom Distress Index (PSDI) between these groups. The univariate ANOVA of each of nine SCL-90-R subscale results indicated that the injured soldier differed significantly from the non-injured soldier group on Somatization (SOM), Obsessive-Compulsive (OC), Interpersonal Sensitivity (IS), Anxiety (ANX), Hostility (HOS) and Psychoticism (PSY). However, the
injured soldier group did not differ significantly from the non-injured soldier group on Depression (DEP), Phobic Anxiety (PHOB) and Paranoid Ideation (PAR).

Thus the family of martyr group subjects showed higher clinical severity, endorsed more psychiatric symptoms, and showed higher severity for the positively endorsed symptoms than matched control group (i.e., normal population group). Whereas the injured soldier group subjects only showed higher clinical severity, endorsed more psychiatric symptoms but did not show higher severity for the positively endorsed symptoms.

An attempt was also made to examine the extent of PTSD status of each of the sample sub-groups. Post-traumatic stress disorder (PTSD) was assessed by calculating the prevalence and number of PTSD symptoms based on DSM-III-R criteria among sample sub-groups. Among the 100 families of martyr group subjects, 73 were diagnosed as PTSD and 27 as non-PTSD cases. Among the 100 normal population group subjects, only 9 were diagnosed as PTSD and 91 as non-PTSD cases. Therefore, there was significant difference between a family of martyr group and matched control group (i.e., normal population group) on PTSD status. Among the 100 injured soldier group subjects, 45 were diagnosed as PTSD and 55 as non-PTSD cases. Among 100
non-injured soldier group subjects, only 28 were diagnosed as PTSD and 72 as non-PTSD cases. Thus there were significant differences between injured soldier group and non-injured soldier group on PTSD status.

Further an attempt was made to examine the different onset of PTSD in terms of delayed and undelayed. Among the 73 subjects in the family of martyr group who developed PTSD 16 (21.9%) were diagnosed as delayed onset of PTSD and 57 (78.1%) as undelayed onset of PTSD cases. Among the 9 subjects in the normal population group who developed PTSD, none were diagnosed as delayed onset of PTSD cases. All of the cases in normal population group were chronic. Thus there was no significant difference between a family of martyr group and control matched group (i.e., normal population group) on delayed onset of PTSD cases. And among 45 subjects who developed PTSD in the injured soldier group 14 (31.1%) were diagnosed as delayed onset of PTSD and 31 (68.9%) as undelayed onset of PTSD cases. Among the 28 subjects in the non-injured soldier group who developed PTSD, 13 (46.4%) were reported as delayed onset of symptoms and 15 (53.6%) as undelayed onset of PTSD. Thus there was no significant difference between injured and non-injured soldier group on delayed onset of PTSD.
Further an attempt was also made to find out the relationship between PTSD and psychiatric symptomatology. For this purpose the means and standard deviations of SCL-90-R global scores and subscales for PTSD and non-PTSD in all the four groups were obtained. It is clear from the mean scores and the obtained t-values that PTSD subjects have significantly higher psychiatric symptomatology than non-PTSD. The PTSD subjects in the family of martyr group and injured soldier group show higher clinical severity, endorsed more psychiatric symptoms, and show higher severity for the positively endorsed symptoms than non-PTSD subjects. In addition, the PTSD subjects in family of martyr group and injured soldier group showed significantly higher scores for all the SCL-90-R subscales.

The PTSD subjects in normal population group show significantly higher clinical severity, endorsed more psychiatric symptoms and show higher severity for the positively endorsed symptoms than non-PTSD. The PTSD subjects in normal population group showed significant higher difference for some of the SCL-90-R subscales than the non-PTSD subjects.

In non-injured soldier group the PTSD subjects had significantly higher clinical severity, and endorsed more psychiatric symptoms than non-PTSD subjects. However, there
was no significant difference on Positive Symptom Distress Index (PSDI) between PTSD and non-PTSD subjects in non-injured soldier group. In addition the PTSD subjects in non-injured soldier group showed significant difference on almost all the SCL-90-R subscales, except for Depression (DEP) subscales.

An attempt was made to verify the influence of study groups along with PTSD status on psychiatric symptomatology by two-way ANOVA. Thus the group effect on psychiatric symptomatology was reduced to be insignificant, whereas the main effect of PTSD status on psychiatric symptomatology was highly significant. Further the interaction between study groups and PTSD status was not significant in the family of martyr group and normal population group.

In injured and non-injured soldier group the main effect on three global symptoms measures and nine SCL-90-R subscales, except Somatization (SOM) subscale, was not significant, whereas the main effect of PTSD status on psychiatric symptomatology was highly significant. The interaction of groups and PTSD status was significant only on Obsessive-Compulsive (OC) subscale.

Further it was attempted to investigate the important primary symptom dimensions of SCL-90-R which differentiate PTSD
and non-PTSD in the entire sample as well as four sample groups. For the purpose multiple discriminant analyses was performed and the results indicate very clearly the contribution of some important symptom dimension for the differentiation between PTSD and non-PTSD. It was interesting to observe that not all nine primary symptom dimensions, measured by the subscales SCL-90-R, were equally contributing to the differentiation. In entire sample the symptom dimension like anxiety, interpersonal sensitivity, depression and hostility were the major symptom dimensions that have led to the differentiation between PTSD and non-PTSD. This clearly explains that PTSD subjects exhibited more anxiety, interpersonal sensitivity, higher depression and severe hostility than non-PTSD subjects.

A similar trend is observed for the study group like family of martyr group wherein interpersonal sensitivity, phobic anxiety, depression and hostility were the major symptom dimensions that have contributed to the differentiation of PTSD and non-PTSD. However, in normal population group it is obsessive-compulsive (33.88%) symptom that dominates the differentiation followed by anxiety (23.86%), the interpersonal sensitivity dimension (13.84%) contributes moderately. The trend was slightly altered in case of injured soldier group. In this group it was depression that has the highest percentage
(48.83%) of differentiation. Next to it was obsessive-compulsive (15.05%) symptom dimension followed by interpersonal sensitivity (8.70%) and anxiety (8.30%). But the entire picture gets reversed in case of non-injured soldier group. The symptom dimension that has the highest percentage of differentiation between PTSD and non-PTSD in this group was hostility (40.00%) the rest of the other symptom dimension have below 10.00% except interpersonal sensitivity (11.89%). Although anxiety, depression, interpersonal sensitivity and obsessive-compulsive were the major symptom dimensions to differentiate between PTSD and non-PTSD of study groups except the non-injured soldier group wherein hostility has dominated the differentiation. It is clear from the result that the non-injured soldiers who developed hostility as a way of coping with fear, after war the hostility remains as generalized symptom in the peace time situation.

Another important focus of investigation in the present study was to determine the predictive efficiency of independent variables as well as to estimate the relative contribution of each independent variable to the variance in the dependent variable. According to the plan of the study, multiple regression analysis was carried out treating the socio-demographic factors as independent variables while treating
psychiatric symptomatology (GSI), PTSD and severity of PTSD scores as dependent variables.

Thus, in family of martyr group out of eleven (11) socio-demographic factors studied, the contribution of age to the variance in the Global Severity Index (GSI) was the highest followed by pre-war visit to the psychiatrist. This means that subjects in the family of martyr group who were younger with preexisting mental difficulties were more vulnerable to psychological difficulties. Using the same socio-demographic factors as independent variables, step-wise multiple regression was computed to assess the relative contribution of each of these factors to the variance in the dependent variables i.e., PTSD and severity of PTSD in family of martyr group. However, no variable entered the equation pertaining to PTSD. Whereas, severity of PTSD was predicted well by variable spouses and mothers. That means, among fathers, mothers and spouses of martyr, only the spouses and mothers had more severe PTSD symptoms.

Further to assess the influence of each socio-demographic factor and their independent influence on Global Severity Index (GSI), PTSD and severity of PTSD a multiple regression analysis was performed in the normal population group. The findings showed that factors like pre-war visit to psychiatrist and sex
have made independent contribution to the prediction of psychiatric symptomatology. However, subjects in the normal population group with preexisting psychological problems and females had more severe psychiatric symptomatology. The PTSD was also predicted well by sex variable alone. That means, females in normal population group were more vulnerable subjects to PTSD symptoms, but severity of PTSD was predicted well by family support variable. Thus subjects with lack of family support in normal population group might develop more severe PTSD symptoms.

Using socio-demographic factors as independent variables, further step-wise multiple regression was computed to assess the contribution of these factors to the variance in the dependent variables i.e., Global Severity Index (GSI), PTSD and severity of PTSD in injured soldier group. The findings revealed that type of injury, family support and education, all make independent contributions to the prediction of psychiatric symptomatology. However, injured soldiers who were wounded both physically and psychologically, lacking family support and having less education were more vulnerable to psychological problems. Whereas, PTSD were predicted well by the type of injury, pre-war visit to psychiatrist and post-war visit to psychiatrist variables. Thus soldiers who were wounded physically and psychologically, with preexisting psychological
problems and post-war visit to psychiatrist were more vulnerable to PTSD symptoms. But in injured soldier group no variable entered into regression analysis with the severity of PTSD.

In order to identify the socio-demographic factors associated with Global Severity Index (GSI), PTSD and severity of PTSD in non-injured soldier group, further step-wise multiple regression analysis was performed. The GSI was predicted well by the variables, social support, familial history of psychopathology and post-war visit to psychiatrist. Therefore, soldiers with lack of social support, with familial record of psychopathology and with post-war mental difficulties were more vulnerable to psychiatric symptomatology. Whereas, PTSD were predicted well by variables — family support, social support and military attachment. This means that non-injured soldiers were more vulnerable to PTSD symptoms, with lack of family and social support and those who were forced to go to battlefield. But, the variable subjects' self-assessment of severity of PTSD contributed to the prediction of severity of PTSD in non-injured soldier group. However, non-injured soldiers have correctly judged the severity of their PTSD.

Results indicated that subjects diagnosed with PTSD endorsed more psychiatric symptoms (GSI) and reported a higher
number of positively endorsed symptoms (PST) and a higher severity of positively endorsed symptoms (PSDI) than did their counterparts not so diagnosed in sample groups. Similarly, subjects with PTSD showed more severe symptomatology on most SCL-90-R subscales than subjects without PTSD. These differences were especially marked with regard to anxiety, interpersonal sensitivity, depression and hostility. In addition, among subjects with PTSD, those who had been exposed to severe combat experience showed wider and more severe symptomatology than those who had not sustained severe combat experiences.

The finding that more severe symptomatology was observed among PTSD subjects with an antecedent of severe combat stress than among PTSD subjects with no combat stress can be explained in different ways. First, it is possible that subjects with an antecedent of severe combat stress were, in fact, more vulnerable individuals. Second, the finding may be attributed to the severe incapacitating nature of combat stress. Third, subjects with a history of combat stress may perceive themselves as more vulnerable, expect to have more symptoms, and be more willing to report them.

In conclusion, results point to characteristic features of PTSD among Iranian war affected population. The SCL-90-R
subscales employed in this study indicate that PTSD is a complex entity encompassing a large variety of manifestations that differ in quality and quantity from one group to another. Further studies on the various expressions of PTSD are needed. Such studies could contribute to a refinement of diagnostic criteria and may have considerable bearing on treatment of such cases.

However, from the results obtained, the following main conclusion may be drawn:

1. The family of martyr group had more severe psychiatric symptomatology than matched control group (i.e., normal population group).

2. The injured soldier group had more severe psychiatric symptomatology than the non-injured soldier group.

3. The extent of PTSD was significantly higher in a family of martyr group than in the matched control group (i.e., normal population group).

4. The extent of PTSD was significantly higher in injured soldier group than in the non-injured soldier group.

5. There was significant variation in PTSD status between the matched groups, i.e., between 1 and 2 and between 3 and 4.
6. There were no significant differences between matched groups (i.e., 1 and 2 and 3 and 4) on delayed and undelayed onset of PTSD symptoms.

7. In family of martyr group, PTSD subjects had significantly higher psychiatric symptomatology on all the three global indices as well as on nine primary symptom dimensions than the non-PTSD subjects.

8. In normal population group, PTSD subjects had significantly higher psychiatric symptomatology on all the three global symptoms measures as well as on all the primary symptom dimensions except on phobic anxiety and psychoticism than non-PTSD subjects.

9. In injured soldier group, PTSD subjects had significantly higher psychiatric symptomatology on all the three global symptoms measures as well as on all the nine primary symptom dimensions than the non-PTSD subjects.

10. In non-injured soldier group, PTSD subjects had significantly higher psychiatric symptoms on Global Severity Index (GSI) and Positive Symptom Total (PST) than the non-PTSD subjects.

11. In non-injured soldier group, PTSD subjects did not differ significantly on Positive Symptom Distress Index (PSDI) from non-PTSD subjects.
12. In non-injured soldier group, PTSD subjects had significantly higher psychiatric symptoms on all the primary dimension measures except on Depression (DEP) than the non-PTSD subjects.

13. Group influence on psychiatric symptomatology revealed that there was no significant influence of study groups like family of martyr and normal population groups on psychiatric symptomatology.

14. There was no significant influence of study groups viz., injured and non-injured soldier groups on psychiatric symptomatology except on Somatization (SOM) primary symptom dimension.

15. There was significant influence of PTSD status on psychiatric symptomatology of all the three global symptoms measures and nine primary symptom dimensions.

16. There was no significant interaction effect of study groups and PTSD status on psychiatric symptomatology of all the three global symptoms measures and nine SCL-90-R subscales. However, the interaction of injured and non-injured soldier groups and PTSD status had significant influence on obsessive-compulsive primary symptom dimension.
17. In entire sample, Anxiety (ANX), Interpersonal Sensitivity (IS), Depression (DEP) and Hostility (HOS) were the most differentiating primary symptom dimensions between PTSD and non-PTSD subjects.

18. In family of martyr group, Interpersonal Sensitivity (IS) and Phobic Anxiety (PHOB) were predominantly differentiating primary symptom dimensions between PTSD and non-PTSD subjects.

19. In normal population group, the primary symptom dimensions like Obsessive-Compulsive (OC) and Anxiety (ANX) were the main scales to differentiate between PTSD and non-PTSD subjects.

20. In injured soldier group it is Depression (DEP) dimension which differentiated between PTSD and non-PTSD subjects to the extent of 48.83%.

21. In non-injured soldier group, Hostility (HOS) primary symptom dimension differentiated between PTSD and non-PTSD subjects to the extent of 40.00%.

22. The following is the summary of conclusions based on multiple (step-wise) regression analysis:
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<th>Sl. No.</th>
<th>Groups</th>
<th>Symptom dimensions</th>
<th>Factors contributing significantly</th>
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<td>GSI</td>
<td>1. Age</td>
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<td>I.</td>
<td>Family of martyr group</td>
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<td>2. Pre-war visit to psychiatrist</td>
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<td>Severity of PTSD</td>
<td>1. Mothers and spouses</td>
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<td>Normal population group</td>
<td>GSI</td>
<td>1. Pre-war visit to psychiatrist</td>
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<td>2. Sex</td>
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<td></td>
<td>PTSD</td>
<td>1. Sex</td>
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<td>Severity of PTSD</td>
<td>1. Lack of family support</td>
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<td>Injured soldier group</td>
<td>GSI</td>
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<td>Non-injured soldier group</td>
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<td>Severity of PTSD</td>
<td>1. Subjects' self-assessment on severity of PTSD</td>
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