Chapter VI

PREDICTION OF GSI, PTSD AND SEVERITY OF PTSD IN SAMPLE GROUPS
PREDICTION OF GLOBAL SEVERITY INDEX (GSI), PTSD AND SEVERITY OF PTSD IN SAMPLE GROUPS

Another important focus of investigation in the present study is to determine the important socio-demographic factors which contribute to the psychiatric symptomatology and post-traumatic stress disorder of sample of matched groups.

The independent influence of relevant socio-demographic factors viz., age, marital status, education, occupation, family and social support, pre-war visit to psychiatrist, familial history of psychopathology, post-war visit to psychiatrist etc., to the psychiatric symptomatology and post-traumatic stress disorder of sample groups is to be examined. The study intends to assess the significant contribution of each factor in the presence of other factors by using an appropriate statistical analysis.

According to the plan of the study, multiple regression analysis is carried out treating the socio-demographic factors as independent variables and psychiatric symptomatology (GSI) and PTSD and severity of PTSD scores as dependent variables.

The main purpose of using multiple (step-wise) regression analysis is 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.

The equation to predict dependent variable using multiple regression analysis can be written as:

\[ Y = K + a_1 x_1 + a_2 x_2 + a_3 x_3 \ldots a_n x_n \]

where 'Y' denotes the predicted score of dependent variable, 'K' is the constant \( a_1, a_2, a_3 \ldots \) and are the partial regression coefficients and \( x_1, x_2, x_3 \ldots x_n \) are the obtained values on the dependent variables. Beta coefficients are obtained from the equation:

\[
\text{Beta coefficients} = \frac{\text{Partial regression coefficients}}{\text{SD of the independent variable}} \times \frac{1}{\text{SD of the dependent variable}}
\]

Prediction of Global Severity Index (GSI) and from Socio-demographic Variables in Family of Martyr Group

For the assessment of the relative contribution of each of the socio-demographic variable to Global Severity Index (i.e., clinical severity) of family of martyr group, step-wise multiple regression analysis is performed on the data. The socio-demographic variables used as independent
variables are: age ($x_3$), marital status ($X_6$), education ($X_7$), parents (father) $W_1$, Parents (mother) $W_2$, presence at the martyrdom ($X_{15}$), source of getting informed about martyr of sons or spouse ($X_{16}$), family and social support ($X_{17}$, $X_{18}$), pre-war visit to psychiatrist ($X_{25}$), familial record of psychopathology ($X_{27}$). Each of these predictor variables was rated 1 if they were present and '0' if they were not.

In order to identify the factors associated with vulnerability of subjects to post-war difficulties a series of multiple regression analysis is performed. The multiple regression analysis is performed. The multiple regression equation for predicting (GSI) Global Severity Index of family of martyr from socio-demographic variables mentioned above is as follows:

$$\text{Global Severity Index of} = 1.70 - 0.013\, X_3 + 0.343\, X_{25}$$

family of martyr group

$X_3$ = Age

$X_{25}$ = Pre-war visit to psychiatrist

The results of regression analysis pertaining to Global Severity Index (GSI) of family of martyr group in respect of each independent socio-demographic variable are discussed below.
TABLE 26

Multiple (step-wise) Regression Analysis : Dependent Variable : Global Severity Index (GSI) of Family of Martyr Group

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>$R^2$</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age</td>
<td>0.098</td>
<td>-0.013**</td>
<td>4.150E-03</td>
<td>-0.283</td>
<td>-3.020</td>
<td>0.0032</td>
</tr>
<tr>
<td>2.</td>
<td>Previous visit to psychiatrist</td>
<td>0.159</td>
<td>0.343**</td>
<td>0.129</td>
<td>0.248</td>
<td>2.649</td>
<td>0.0094</td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>--</td>
<td>1.710</td>
<td>0.227</td>
<td>--</td>
<td>7.532</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level

Age (X3)

It was believed that age would have greater influence on Global Severity Index (GSI) which gauges the extent and severity of psychiatric symptomatology, of family of martyr group. From multiple regression it is observed that age has entered in the first step and it has contributed negatively. This means that age is the significant predictor of psychiatric symptomatology (younger subjects are more vulnerable to severe psychiatric symptomatology; beta = -0.013 P < 0.01). It is
evident from the results that of all the independent variables, the age variable has contributed more to the prediction of GSI.

Pre-war Visit to Psychiatrist (X25)

It is evident from the results that pre-war visit to psychiatrist has entered in the second age step of multiple regression and it is the second significant predictor (i.e., subjects with pre-war of mental difficulties suffer more severe psychiatric symptomatology; beta = 0.343 P < 0.01). The multiple regression indicates more severe psychological difficulties among the younger with pre-war visits to psychiatrist subjects in family of martyr group.

Table 26 explains the summary of regression analysis of variance in the dependent variable accounted by independent variables. Out of 11 (eleven) socio-demographic variables studied, age accounts the greater contribution to the Global Severity Index (GSI). The next higher contributor is pre-war visit to psychiatrist of family of martyr group. Therefore, subjects in family of martyr group who are younger with pre-existing mental difficulties, experienced more severe psychiatric symptomatology. Several studies indicate that preexisting psychopathological conditions predispose the subject to the development of psychiatric symptomatology.
Prediction of PTSD and Severity of PTSD of Family of Martyr Group

In order to examine the relative contribution of each of the socio-demographic variables to PTSD and the intensity of PTSD of family of martyr group, a step-wise multiple regression was carried out for all the independent variables as predictors of the PTSD and the intensity of PTSD. The same socio-demographic variables are used as independent variables.

The multiple regression equation for predicting PTSD and severity of PTSD of family of martyr group from socio-demographic variables is as follows:

\[
\text{Post-traumatic stress} = \text{No variable entered}
\]

of family of martyr group

The result of regression analysis pertaining to PTSD of family of martyr group in respect of each independent socio-demographic variable revealed that no variable has entered in the equation. Therefore, none of the socio-demographic variables has contributed to PTSD in the family of martyr group significantly.
Severity of PTSD scores = 2.461 - 0.272 \( W_1 \)

of family of martyr group

\( W_1 = \) father \( \quad W_2 = \) mother

Results of regression analysis of severity of PTSD of family of martyr group in respect to each independent socio-demographic variable are given in Table 27.

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>( R^2 )</th>
<th>B</th>
<th>S.EB</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Father</td>
<td>0.083</td>
<td>-0.272*</td>
<td>0.107</td>
<td>-0.288</td>
<td>-2.535</td>
<td>0.0134</td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>—</td>
<td>2.461</td>
<td>0.060</td>
<td>—</td>
<td>40.874</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level

The results presented in Table 27 clearly indicate that being women the spouses and mothers, who had lost their husbands and sons respectively as the result of war physical violence, contribute significantly to the prediction of severity of PTSD in the family of martyr group. Among
father, mother, and spouse of martyr, only the spouse and mothers suffer more severe PTSD (beta = -0.272, P < 0.05).

**Prediction of Global Severity Index (GSI) from Socio-demographic Factors in Normal Population Group**

To assess the influence of socio-demographic factors and their independent influence on Global Severity Index (GSI) multiple regression analysis are performed in the normal population group. The step-wise multiple regression analysis are carried out by treating socio-demographic factors such as: age (X3), sex (X4), marital status (X6), education (X7), family support (X17), social support (X18), pre-war visit to psychiatrist (X25), familial history of psychopathology (X27), post-war visit to psychiatrist (X19) as independent variables on Global Severity Index (GSI), a dependent variable.

The multiple regression equation for predicting GSI of normal population group from socio-demographic variable is as follows:

\[
\text{Global Severity Index (GSI) of normal population group} = 0.822 + 0.539 \times X25 - 0.25 \times X4
\]
The results of regression analysis pertaining to GSI of normal population group in respect of each socio-demographic variable are given in Table 28.

**Table 28**

Multiple (step-wise) Regression Analysis : Dependent Variable : Global Severity Index (GSI) of Normal Population

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>R²</th>
<th>B</th>
<th>S E B</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Previous visit to psychiatrist</td>
<td>0.143</td>
<td>0.53*</td>
<td>0.140</td>
<td>0.352</td>
<td>3.843</td>
<td>0.0002</td>
</tr>
<tr>
<td>2</td>
<td>Sex</td>
<td>0.195</td>
<td>-0.235*</td>
<td>0.093</td>
<td>-0.231</td>
<td>-2.518</td>
<td>0.0134</td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>--</td>
<td>0.822</td>
<td>0.056</td>
<td>--</td>
<td>14.527</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level  
** Significant at 0.01 level

**Pre-war Visit to Psychiatrist (X25)**

It is evident from the results of multiple regression analysis that pre-war visits to psychiatrist variable contribute significantly in prediction of GSI of normal population group. The variable pre-war visit to psychiatrist has entered
in the first step with GSI. The results of present study reveal that pre-war mental difficulties, contribute significantly to the prediction of psychiatric symptomatology (beta = 0.539, P < 0.01), subjects with pre-war visit to psychiatrist are more vulnerable to severe psychiatric symptomatology.

Sex (X4)

Sex is another factor which has entered in the second step with GSI in multiple regression analysis of normal population group. Sex has contributed negatively to the prediction of GSI. The results indicate that females have more severe psychiatric symptomatology in the normal population group (beta = -0.235, P < 0.05).

The summary of regression analysis, for normal population group, showing the prediction of GSI by socio-demographic factors is presented in Table 28. Among the nine socio-demographic factors studied, pre-war visit to psychiatrist is the highest contribution to the psychiatric symptomatology (GSI) of normal population group. Sex is the factor next in order which contribute negatively to the GSI of normal population group. However, subjects in the normal population
group with pre-war visit to psychiatrist and female have more severe psychiatric symptomatology.

Prediction of PTSD and Severity of PTSD of Normal Population Group

The relative contribution of each socio-demographic factor to PTSD and severity of PTSD of normal population group is also investigated. The same set of socio-demographic variables which are used for GSI, are used as independent variables on PTSD and severity of PTSD scores of normal population group for computation of step-wise multiple regression analysis.

The multiple regression equation for predicting PTSD and severity of PTSD for normal population group from socio-demographic factors is as follows:

\[
\text{PTSD scores of normal population group} = 0.134 - 0.134 \times X4
\]

The results of regression analysis of PTSD of normal population group in respect of each of independent socio-demographic variable are presented in Table 29.
TABLE 29

Multiple (step-wise) Regression Analysis: Dependent Variable: PTSD of Normal Population Group

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variable</th>
<th>R²</th>
<th>B</th>
<th>S</th>
<th>EB</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sex</td>
<td>0.049</td>
<td>-0.134*</td>
<td>0.060</td>
<td>-0.221</td>
<td>-2.40</td>
<td>0.0273</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>--</td>
<td>0.134</td>
<td>0.034</td>
<td>--</td>
<td>3.90</td>
<td>0.0002</td>
<td></td>
</tr>
</tbody>
</table>

* Significant at 0.05 level

The results presented in Table 29 clearly indicate that sex has entered the first step in the multiple regression analysis. Sex has contributed negatively to PTSD in the normal population group. Therefore, female did contribute significantly to the prediction of PTSD (beta = -0.134, P < 0.05). This result is in consistency with earlier findings. According to the diagnoses studied in the St. Louis Epidemiologic Catchment Area (ECA) survey, PTSD occurred in 0.5 per cent of men and 1.2 per cent of women.

\[
\text{Severity of PTSD of normal population group} = 2.417 - 0.551 \times 17
\]
The results of regression analysis of severity of PTSD of normal population group in respect of each independent socio-demographic variable are explained in Table 30.

**TABLE 30**

Multiple (step-wise) Regression Analysis : Dependent Variable: Severity of PTSD of Normal Population Group

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>R²</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Family support</td>
<td>0.503</td>
<td>-0.551*</td>
<td>0.207</td>
<td>-0.709</td>
<td>-2.660</td>
<td>0.0325</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>--</td>
<td>2.417</td>
<td>0.154</td>
<td>--</td>
<td>15.645</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level

Table 30 explains vividly that family support is the only variable that entered in the regression analysis with severity of PTSD of normal population group. Family support was found to be negatively contributed with severity of PTSD, subjects with lack of family support have more severe PTSD (beta = -0.551, P < 0.05). The results of the present study are in strong conformity with the earlier findings. Higher severity of PTSD were associated with low family support (i.e., low expressiveness, low cohesiveness and high conflict in the casualties families (Solomon et al., 1987).
Prediction of Global Severity Index (GSI) in Injured Soldier Group

The relative contribution of each socio-demographic factor to the GSI of injured soldier group is also investigated. A set of socio-demographic factors which are used for injured soldier group are: age $X_3$, marital status $X_6$, education $X_7$, period staying in frontline (in months) $X_{11}$, type of injury $X_{12}$, military attachment $X_9$, family support $X_{17}$, social support $X_{18}$, pre-war visit to psychiatrist $X_{25}$, familial history of psychopathology $X_{27}$, and post-war visit to psychiatrist $X_{19}$, as independent variables on GSI scores of injured soldier group for computation of step-wise multiple regression analysis.

The multiple regression equation for predicting GSI for injured soldier group from socio-demographic variables is as follows:

$$GSI = 1.318 + 0.540X_{12} - 0.383X_{17} - 0.473X_7$$

The results of regression analysis of injured soldier group in respect of each independent socio-demographic factors are presented in Table 31.
TABLE 31
Multiple (step-wise) Regression Analysis: Dependent Variable: Global Severity Index (GSI) of Injured Soldier Group

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>$R^2$</th>
<th>B</th>
<th>S E B</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type of injury</td>
<td>0.241</td>
<td>0.540**</td>
<td>0.101</td>
<td>0.439</td>
<td>5.339</td>
<td>0.0000</td>
</tr>
<tr>
<td>2</td>
<td>Family support</td>
<td>0.333</td>
<td>-0.383**</td>
<td>0.112</td>
<td>-0.284</td>
<td>-3.428</td>
<td>0.0009</td>
</tr>
<tr>
<td>3</td>
<td>Education</td>
<td>0.367</td>
<td>-0.473*</td>
<td>0.208</td>
<td>-0.186</td>
<td>-2.268</td>
<td>0.0256</td>
</tr>
<tr>
<td>(Constant)</td>
<td></td>
<td>--</td>
<td>1.318</td>
<td>0.221</td>
<td>--</td>
<td>5.950</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level
** Significant at 0.01 level

Type of Injury ($X_{12}$)

The results presented in Table 31 clearly indicate that type of injury has entered the first step in the prediction of GSI in injured soldier group. Type of injury is undoubtedly the most influential factor of GSI in the injured soldier group. Soldiers who are injured both physically and psychologically have more severe psychiatric symptomatology than soldiers with only physical injury ($\beta = 0.540, p < 0.01$).
The results of the present study are in strong conformity with the findings of earlier studies. The stressor of both physical and psychological trauma leads to more severe psychological difficulties.

**Family Support (X17)**

It is clear from the results that the family support has entered negatively in the second step of multiple regression and being the second significant predictor of Global Severity Index (GSI) in injured soldier group, results found that lack of family support contributes to the severity of psychiatric symptomatology. In the other words, we can say wounded soldiers who receive high family support reported fewer psychiatric symptomatology (beta = -0.382, P < 0.01).

**Education (X7)**

Education is another independent variable which has entered negatively in the third step with GSI in multiple regression analysis of injured soldier group. However, there is significant contribution of education to GSI in the injured soldier group (beta = -0.473, P < 0.05). Results revealed that less educated subjects have more severe psychiatric symptomatology in the injured soldier group i.e., wounded soldiers with
lack of education are more vulnerable to psychiatric symptomatology.

The summary of regression analysis of injured soldier group, exhibiting the prediction of Global Severity Index (GSI) by socio-demographic variables are shown in Table 31. Among the 11 (eleven) socio-demographic variables selected, type of injury is the highest contributor to the GSI in injured soldier group. Family support is the factor next in order which contributes negatively to the Global Severity Index (GSI). And education is the factor last in order which also contributes negatively to the prediction of GSI in the injured soldier group. Therefore, soldiers who have both physical and psychological injury with lack of family support and little education, are more vulnerable to psychological difficulties.

Prediction of PTSD and Severity of PTSD in Injured Soldier Group

To investigate further, the relative contribution of each socio-demographic factor to the PTSD and severity of PTSD of the injured soldier group will be examined. The step-wise multiple regression analysis is carried out by treating the same socio-demographic factors which are used in GSI in injured soldier group.
The multiple regression equation for predicting PTSD and severity of PTSD of injured soldier group from socio-demographic variables is as follows:

\[
\text{Post-traumatic stress} = 0.129 + 0.351 \times 12 + 0.529 \times 25 + 0.217 \times 19
\]

\(X_{12} = \text{Type of injury}\)
\(X_{25} = \text{Pre-war visit to psychiatrist}\)
\(X_{19} = \text{Post-war visit to psychiatrist}\)

The results of regression analysis pertaining to PTSD of injured soldier group in respect of each independent socio-demographic variable are given in Table 32.

Type of Injury (X12)

Table 32 explains the multiple regression analysis of type of injury variable to the prediction of PTSD of injured soldier group. Type of injury factor has entered in the first step with PTSD (beta = 0.351, \(P < 0.01\)). However, soldiers who experienced both physical and psychological war trauma are more vulnerable to PTSD. A soldier wounded physically and psychologically suffered more PTSD symptoms. The results are consistent with the findings of previous studies that wounded soldiers,
TABLE 32

Multiple (step-wise) Regression Analysis : Dependent Variable : PTSD of Injured Soldier Group

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>$R^2$</th>
<th>B</th>
<th>S FB</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type of injury</td>
<td>0.219</td>
<td>0.351**</td>
<td>0.100</td>
<td>0.346</td>
<td>3.497</td>
<td>0.0007</td>
</tr>
<tr>
<td>2</td>
<td>Pre-war visit to psychiatrist</td>
<td>0.287</td>
<td>0.529**</td>
<td>0.177</td>
<td>0.252</td>
<td>2.292</td>
<td>0.0035</td>
</tr>
<tr>
<td>3</td>
<td>Post-war visit to psychiatrist</td>
<td>0.319</td>
<td>0.217*</td>
<td>0.102</td>
<td>0.212</td>
<td>2.134</td>
<td>0.0354</td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>--</td>
<td>0.129</td>
<td>0.066</td>
<td>--</td>
<td>1.945</td>
<td>0.0547</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level

** Significant at 0.01 level

both physically and psychologically, who had severe combat exposure have more PTSD symptoms.

Pre-war Visit to Psychiatrist

Pre-war visit to a psychiatrist is another factor which has entered in the second step of multiple regression analysis with PTSD of injured soldier group. The variable pre-war visit
to psychiatrist is significantly contributed in the prediction of more PTSD symptoms (beta = 0.529, P < 0.01). Therefore, soldiers with pre-existing mental difficulties suffered more PTSD symptoms, which is consistent with the prior studies conducted.

Post-war Visit to Psychiatrist

Post-war visit to psychiatrist variable has entered in the third step of multiple regression analysis with PTSD in injured soldier group. The contribution of post-war visit to psychiatrist is lower than that of type of injury and pre-war visit to psychiatrist. However, post-war visit to psychiatrist variable had contributed significantly to the prediction of PTSD (beta = 0.217, P < 0.05).

The summary of regression analysis, for injured group, showing contributions in PTSD scores accounted by independent variables is presented in Table 32. Among the eleven socio-demographic variables studied, type of injury has the highest contribution to the PTSD of injured soldier group, pre-war visit to psychiatrist and post-war visit to psychiatrist are the next order factors contributing to the PTSD of injured soldier group.
Severity of PTSD scores = No variable entered of injured soldier group

The results of regression analysis of severity of PTSD of injured soldier group in respect of each independent socio-demographic variable indicate that no variable has entered into multiple regression with severity of PTSD.

Prediction of GSI from Socio-demographic Factors in Non-injured Soldier Group

In order to assess the relative contribution of each set of socio-demographic factors to Global Severity Index (GSI), which gauges the extent and severity of the psychiatric symptomatology, in non-injured soldier group, step-wise multiple multiple regression analysis is conducted on the data. The socio-demographic variables which have taken into regression analysis are: age X3, marital status X6, education X7, military attachment X9, period being in frontline X11, family support X17, social support X18, pre-war visit to psychiatrist X25, familial record of psychopathology X27, post-war visit to psychiatrist X19, and they are considered as independent variables on Global Severity Index — a dependent variable in the non-injured soldier group.

The multiple regression equation for predicting Global
Severity Index (GSI) from a set of socio-demographic variables mentioned above is as follows:

\[
\text{Global Severity Index (GSI) of non-injured soldier group} = 0.842 - 0.353 \times X_{18} + 0.434 \times X_{27} + 0.502 \times X_{19}
\]

\(X_{18} = \text{Social support}\)

\(X_{27} = \text{Familial record of psychopathology}\)

\(X_{19} = \text{Post-war visit to psychiatrist}\)

Table 33 exhibits the results of regression analysis pertaining to Global Severity Index (GSI) in respect to each independent socio-demographic variable in non-injured soldier group.

**Social Support (\(X_{18}\))**

The results presented in Table 33 clearly indicate that the variable social support has entered the first step in the multiple regression analysis of the non-injured soldier group. Social support variable has contributed negatively to the GSI of the non-injured soldier group, which means soldiers who received low social support reported more severe psychiatric symptomatology (beta = -0.353, \(P < 0.01\)). This result is in
TABLE 33
Multiple (step-wise) Regression Analysis: Dependent Variable: Global Severity Index of Non-injured Soldiers Group

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>R²</th>
<th>B</th>
<th>S EB</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social support</td>
<td>0.169</td>
<td>-0.353**</td>
<td>0.091</td>
<td>-0.330</td>
<td>-3.874</td>
<td>0.0002</td>
</tr>
<tr>
<td>2</td>
<td>Familial record of psychopathology</td>
<td>0.266</td>
<td>0.434**</td>
<td>0.114</td>
<td>0.324</td>
<td>3.820</td>
<td>0.0002</td>
</tr>
<tr>
<td>3</td>
<td>Visit to psychiatrist (after war)</td>
<td>0.334</td>
<td>0.502**</td>
<td>0.161</td>
<td>0.261</td>
<td>3.120</td>
<td>0.0024</td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>--</td>
<td>0.842</td>
<td>0.823</td>
<td>--</td>
<td>10.232</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level

Agreement with earlier findings that the absence of social support in stressful situations may increase the vulnerability of individuals to illnesses associated with exposure to stress (Cobb, 1976; Hobfoll and Walfish, 1984). Some claimed that the absence of social support is a stress factor in and of itself that may create psychological disturbances. A number of studies have actually shown that
subjects who have a good deal of social support are less vulnerable to psychological disorders (Cobb, 1976; Cooney and Mckay, 1984; Gottlieb, 1978; Holahan and Moos, 1981; Barrett and Mizes, 1983). Those who receive social support may feel that they are more capable of mastering stress and that they are part of a caring network of significant others (Caplan, 1974; Cohen and Wills, 1985).

Familial History of Psychopathology (X27)

Familial record of psychopathology is another variable which has entered in the second step of multiple regression analysis with Global Severity Index (GSI) of non-injured soldier group. However, familial record of psychopathology, did contribute significantly to the prediction of psychiatric symptomatology (beta = 0.434, P < 0.01). Soldiers with familial record of psychopathology have more psychiatric symptomatology. This result is in agreement with earlier findings. Family history, of course, is one important way of validating a diagnostic entity. Both Slater (1943) and Symonds (1943), in their studies of World War II personnel, concluded that if hereditary factors were strong, neurotic breakdown occurred under mild stress, whereas in the absence of a positive heredity, severe stress was needed to bring out symptoms.
Post-war Visit to Psychiatrist (X19)

Post-war visit to psychiatrist variable has entered in the third step of multiple regression analysis for prediction of Global Severity Index (GSI) in the non-injured soldier group. Therefore, post-war visit to psychiatrist variable did contribute significantly to the prediction of psychological difficulties (beta = 0.502, P < 0.01).

The summary of regression analysis for non-injured soldier group showing the relative contributions of independent variables to the prediction of Global Severity Index (GSI) is presented in Table 33. Out of the ten socio-demographic variables studied, social support, familial record of psychopathology and post-war visit to psychiatrist had higher contribution to psychiatric symptomatology of non-injured soldier group.

Prediction of PTSD and Severity of PTSD of Non-injured soldier group

The relative contribution of each socio-demographic factor to the PTSD and Severity of PTSD of non-injured soldier group is also assessed. The same set of socio-demographic factors which are used for GSI, are used as independent variables on PTSD and
severity of PTSD scores of non-injured soldier group for obtaining step-wise multiple regression analysis.

The multiple regression equation for predicting PTSD and severity of PTSD for non-injured soldier group from socio-demographic variables is as follows:

\[
\text{PTSD scores of non-injured soldier group} = 0.727 - 0.305 \times X_{17} - 0.189 \times X_{9} - 0.194 \times X_{18}
\]

\(X_{17} = \text{Family support}\)
\(X_{9} = \text{Military attachment}\)
\(X_{18} = \text{Social support}\)

Results of regression analysis of PTSD of non-injured soldier group in respect of each independent socio-demographic variable are presented in Table 34.

**Family Support (X17)**

Table 34 clearly indicates that family support has entered negatively in the first step of multiple regression analysis to PTSD of non-injured soldier group. Family support contributes significantly to the prediction of PTSD symptoms (beta = -0.305, P < 0.01). The results of the present study
<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variables</th>
<th>$R^2$</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Family support</td>
<td>0.112</td>
<td>-0.305**</td>
<td>0.103</td>
<td>-0.277</td>
<td>-2.962</td>
<td>0.0039</td>
</tr>
<tr>
<td>2</td>
<td>Military attachment</td>
<td>0.159</td>
<td>-0.189*</td>
<td>0.086</td>
<td>-0.203</td>
<td>-2.209</td>
<td>0.0295</td>
</tr>
<tr>
<td>3</td>
<td>Social support</td>
<td>0.197</td>
<td>-0.194*</td>
<td>0.092</td>
<td>-0.198</td>
<td>-2.114</td>
<td>0.0371</td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>0.727</td>
<td>--</td>
<td>0.104</td>
<td>--</td>
<td>7.012</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

* Significant at 0.05 level  
** Significant at 0.01 level

are consistent with earlier findings. Higher rate of PTSD was associated with lack of family support, in terms of family relationship dimensions cohesiveness, expressiveness, and conflict. Cohesiveness is the degree to which the family members feel committed to and help and support each other. Expressiveness reflects the degree of openness of expression, self-revelation, and the sharing of feelings and upsetting experiences. Conflict relates to the degree to which anger, violence, and struggle characterize the family. Low family
support (i.e., low expressiveness, cohesiveness and high conflict) in the casualties families contribute significantly to more PTSD symptoms.

**Military Attachment (X9)**

Military attachment has entered in the second step of multiple regression analysis to PTSD in non-injured soldier group. Military attachment variable negatively contributed to the prediction of PTSD (beta = -0.189, P < 0.05).

Soldiers who had been forced to go to battlefield suffer more PTSD symptoms than those who voluntarily participated in battle -- they are less vulnerable to PTSD symptoms.

**Social Support (X18)**

Social support has entered in the third step of multiple regression analysis to PTSD of non-injured soldier group. The social support variable contributed significantly to the prediction of PTSD (beta = 0.194, P < 0.05). Social support was found to negatively contribute to prediction of PTSD symptoms. This result is in conformity with earlier findings. Social support has been seen as helping the individual through the prolonged adjustment period and limiting the occurrence of
secondary stress. Also, those who receive social support may feel that they are more capable of mastering stress and may feel that they are part of a caring network of significant others (Caplan, 1974; Cohen and Wills, 1985).

The summary of regression analysis for non-injured soldier group showing the significant prediction of PTSD scores accounted by independent variables is presented in Table 34. Out of the ten socio-demographic variables studied, family support has the highest contribution to PTSD of non-injured soldier group. Military attachment and social support are the next order factors contributing to the PTSD of non-injured soldier group.

Severity of PTSD scores in non-injured soldier group = 1.971 + 0.864 X34

X34 = Severity of PTSD based on subjects' self-assessment

The results of regression analysis of severity of PTSD of non-injured soldier group in respect of each independent socio-demographic variable are presented in Table 35.
TABLE 35

Multiple (step-wise) Regression Analysis : Dependent Variable : Severity of Soldier PTSD of Non-injured Soldier Group

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Independent variable</th>
<th>$R^2$</th>
<th>B</th>
<th>S E B</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Severity of PTSD according to subjects self-assessment</td>
<td>0.329</td>
<td>0.864**</td>
<td>0.247</td>
<td>0.573</td>
<td>3.498</td>
<td>0.0018</td>
</tr>
<tr>
<td>(Constant)</td>
<td>--</td>
<td>--</td>
<td>1.971</td>
<td>0.095</td>
<td>--</td>
<td>20.745</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level

The results presented in Table 35 clearly indicate that subjects' self-judgement on severity of PTSD has entered the first step with severity of PTSD in the non-injured soldier group. Subjects' soldiers self-judgement on severity of PTSD contributed significantly to the prediction of severity of PTSD (beta = 0.864, P < 0.01). Therefore, non-injured soldiers who have correctly judged the severity of PTSD were the persons suffered more. In other words, the judgement of severity of PTSD was more accurate.
The summaries of regression analysis for four study groups reveal that socio-demographic factors associated with PTSD, severity of PTSD, and other psychiatric symptoms among combat stress reaction casualties. The analyses clearly indicate that these outcomes have a complex aetiology.

An overview of the findings shows that a number of different socio-demographic factors like sex, family support, type of injury, pre-war visit to psychiatrist, post-war visit to psychiatrist, social support, military attachment, and subjects' self-judgement of intensity of PTSD in four sample groups, all make independent contributions to the prediction of PTSD and severity of PTSD.

In the family of martyr group, no variable has contributed, to the prediction of PTSD, whereas, for the severity of PTSD, the spouses, has contributed the most.

In the normal population group, sex has contributed the most to the prediction of PTSD, whereas, family support is the only variable that contributed with severity of PTSD of normal population group.

Type of injury, pre-war visit to psychiatrist and post-war visit to psychiatrist occupy a top place in the hierarchy
of contributions to prediction of PTSD in the injured soldier group. Whereas, no variable has contributed to the prediction of severity of PTSD in the injured soldier group.

In non-injured soldier group, family support, social support, and military attachment occupy a top place in the hierarchy of contribution to the prediction of PTSD. Whereas, the variable subjects' self-judgement on intensity of PTSD has contributed the most to the prediction of severity of PTSD in the non-injured soldier group.

The psychological symptoms were predicted well by age, pre-war visit to psychiatrist, sex, type of injury, family support, education, social support, and familial record of psychopathology in four sample groups.

In family of martyr group the psychological symptoms were well-predicted by age and pre-war visit to psychiatrist (i.e., preexisting mental difficulties).

Sex and pre-war visit to psychiatrist have contributed the most to the prediction of psychological symptoms in normal population group.

The psychological symptoms were predicted well by type
of injury, family support and education in the injured soldier group.

In the non-injured soldier group, social support and familial record of psychopathology has contributed the most to the prediction of psychological symptoms.