CHAPTER V

RESULTS AND DISCUSSION
The problem for the present investigation being the psycho-social factors of delinquency proneness, certain hypotheses were formulated and the relevant data were collected. The data were examined in the light of the hypotheses. This is considered under nine headings as given below.

1. Delinquency proneness and Multiple factors:

Now-a-days instead of uni-causal factor approach, a multiple factor approach is accepted by most of the researchers. In the present investigation also this approach was followed. The combined influence of the various social and psychological components in the origin of delinquency proneness were probed.

The hypothesis that "Delinquency proneness would be the result of the combined effect of schooling, neuroticism, mental ability, size of the family, disharmony between parents and quarrels among the siblings" was examined in depth by using the following procedure.
Multiple regression analysis was carried out by taking delinquency proneness as the dependent variable, and schooling, neuroticism, mental ability, size of the family, disharmony between parents and quarrels among the siblings were all taken as the independent variables. The notation 'Y' was used for the dependent variable, delinquency proneness. For the independent variables $X_1$, $X_2$, $X_3$, $X_4$, $X_5$ and $X_6$ were used as notations respectively for schooling, neuroticism, mental ability, size of the family, disharmony between parents and quarrels among the siblings.

Dummy coding was used for the variables viz., schooling, size of the family, disharmony between parents and quarrels among the siblings. Those exhibiting the characteristic were given a code of '1' and those not possessing the characteristic were given a code of '0'. For the other variables actual scores were taken into consideration.

For the sake of convenience the data gathered were separated into two classes, those
hailing from broken home conditions, and those hailing from non-broken home conditions or intact homes. Two multiple regression analyses were carried out. In the following pages the results of the multiple regression analysis will be discussed separately for the two groups of children mentioned above.

According to Kerlinger and Pedhazur (1973) "Multiple regression is a method of analyzing the collective and separate contributions of two or more independent variables, $X_j$, to the variation of a dependent variable, $Y$". Here the influence of several independent variables upon the dependent variable is studied. The main advantage of the multiple regression analysis is that the complex interaction of the independent variables is analyzed. This is a modern technique widely used in psychological, economic, political, sociological, agricultural and educational research. An added advantage of multiple regression analysis is the discription of an observed phenomenon in terms of a few meaningful variables in a simpler way.
An important step in multiple regression is the step down regression. In the step down method, the regression of 'Y' on all 'X' variables is calculated. The contribution of each variable to the 'Y' is examined carefully and the variables are eliminated one after the other. Here a chosen level of significance is taken for omission or inclusion of the variable. This process is continued until no variable qualifies for omission. In their book "Regression Analysis by Example", Chatterjee and Price (1977) emphasized that "The order in which the variables enter or leave the equation in stepwise procedures should not be interpreted as reflecting the relative importance of the variables."

a. Multiple regression analysis in broken home conditions:

The following tables give an account of the multiple regression analysis for the subjects under broken home conditions. Here parental disharmony is not included as an independent variable. Since in the broken home condition
the parents are separated due to divorce or death, the question of disharmony between parents does not arise. The notations used in the multiple regression analysis are explained below.

\[Y = \text{Dependent Variable; Delinquency proneness}\]
\[X_1 = \text{Independent Variable I; Schooling}\]
\[X_2 = \text{Independent Variable II; Neuroticism}\]
\[X_3 = \text{Independent Variable III; Mental ability}\]
\[X_4 = \text{Independent Variable IV; Size of the family}\]
\[X_5 = \text{Independent Variable V; Quarrels among the siblings.}\]

The table below represents the correlation matrix for the various independent variables and the dependent variable.
The above table shows the correlation matrix for the various variables in the broken home conditions. It is evident that neuroticism is highly correlating with delinquency proneness ($r = .6692$). This is significant at .01 level. The correlation between mental ability and delinquency proneness is found to
be negative thereby indicating that mental ability is negatively related to delinquency proneness \( r = -0.3312 \), significant at .01 level. Size of the family is positively but moderately related to delinquency proneness \( r = 0.3786 \), significant at .01 level. The variable quarrels among the siblings is also significantly related to delinquency proneness \( r = 0.2947 \) is significant at .01 level. Lastly, the variable schooling is found to be insignificantly related to the delinquency proneness. Individual regressors are given below.

\[
Y = 24.55 + -3.4474 \; X_1 \\
Y = 3.3449 + 1.0179 \; X_2 \\
Y = 34.7778 + -0.5689 \; X_3 \\
Y = 14.8 + 10.5165 \; X_4 \\
Y = 17.2174 + 7.7626 \; X_5
\]

The results of the multiple regression and the step down regressions are shown in the following table.
Table 11

Multiple Regression and forced step down regressions for the subjects belonging to broken home conditions

Multiple Regression

\[ R^2 = 0.8213 \]

\[ F = 22.343 \quad (df \ 93, 6) \]

<table>
<thead>
<tr>
<th></th>
<th>S. Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>4.4476</td>
<td>0.5670</td>
</tr>
<tr>
<td>X_1</td>
<td>1.6250</td>
<td>2.6492  **</td>
</tr>
<tr>
<td>X_2</td>
<td>0.1155</td>
<td>7.5759  **</td>
</tr>
<tr>
<td>X_3</td>
<td>0.1226</td>
<td>2.1478  *</td>
</tr>
<tr>
<td>X_4</td>
<td>2.2966</td>
<td>1.7516</td>
</tr>
<tr>
<td>X_5</td>
<td>2.1805</td>
<td>1.0630</td>
</tr>
</tbody>
</table>
**Forced Step Down Regression**

\[ B(u) = 5 \quad 0.25000 \]
\[ R^2 = 0.5206 \]
\[ F = 27.808 \quad (df \ 94, \ 4) \]

<table>
<thead>
<tr>
<th></th>
<th>S. Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>( a )</td>
<td>4.4385</td>
<td>0.6472</td>
</tr>
<tr>
<td>( X_1 )</td>
<td>1.6027</td>
<td>2.5037 *</td>
</tr>
<tr>
<td>( X_2 )</td>
<td>0.1146</td>
<td>7.7707 **</td>
</tr>
<tr>
<td>( X_3 )</td>
<td>0.1227</td>
<td>2.1452 *</td>
</tr>
<tr>
<td>( X_4 )</td>
<td>2.0370</td>
<td>2.5301 *</td>
</tr>
</tbody>
</table>

\[ B(u) = 4 \quad 0.25000 \]
\[ R^2 = 0.4934 \]
\[ F = 32.81116247 \quad (df \ 95, \ 3) \]

<table>
<thead>
<tr>
<th></th>
<th>S. Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>( a )</td>
<td>4.4629</td>
<td>1.1676</td>
</tr>
<tr>
<td>( X_1 )</td>
<td>1.6472</td>
<td>2.4883 *</td>
</tr>
<tr>
<td>( X_2 )</td>
<td>0.1132</td>
<td>8.5840 **</td>
</tr>
<tr>
<td>( X_3 )</td>
<td>0.1260</td>
<td>2.3035 *</td>
</tr>
</tbody>
</table>
\textbf{\^Step down\^}

\begin{align*}
B (u) & = 1 \quad 0.85000 \\
R^2 & = 0.4660 \\
F & = 43.7547918 \quad (df \ 96, \ 2) \\
\end{align*}

\begin{tabular}{ccc}
\hline
 & S. Error & t-value \\
\hline
a & 4.5736 & 0.8924 \\
X_1 & 0.1159 & 8.2089 ** \\
X_2 & 0.1291 & 2.3076 * \\
\hline
\end{tabular}

\textbf{\^Step down\^}

\begin{align*}
B (u) & = 3 \quad 0.25000 \\
R^2 & = 0.4422 \\
F & = 78.677 \quad (df \ 97, \ 1) \\
\end{align*}

\begin{tabular}{ccc}
\hline
 & S. Error & t-value \\
\hline
a & 3.1078 & 1.0763 \\
X_2 & 0.1146 & 8.8700 ** \\
\hline
\end{tabular}

** Significant at .01 level \quad * Significant at .05 level
The square of the multiple correlation coefficient ($R^2$) is .5313. The other name for $R^2$ is the coefficient of multiple determination. This shows that the five independent variables contribute to 52\% of the variance of 'Y'. The rest of the 48\% of the variance is to be explained by variables other than the five variables which were investigated. The F ratio is 22.34 for df 93 and 5. This is highly significant. On the basis of this it can be concluded that the five independent variables acting together are contributing significantly to the delinquency proneness.

When the t-values for the different variables are considered, it is found that the t-value for neuroticism ($X_2$) is 7.5769. It is significant at .01 level. In addition to this the t-value for schooling ($X_1$) is 2.65. It is found to be a significant contributor (at .01 level) for delinquency proneness. For mental ability ($X_3$) the t-value is 2.1478. It is significant at .06 level. Size of the family ($t = 1.75$) and
quarrels among the siblings ($t = 1.06$) are not significantly related to delinquency proneness, when all the independent variables are taken together.

When step down regressions were studied the following findings were made. When quarrels among the siblings ($X_5$) was removed from regression equation it was found that $R^2$ remained almost same ($R^2 = .5306$). This confirms that quarrels among the siblings is an irrelevant factor. When size of the family ($X_4$) as a factor is removed from the multiple regression the $R^2$ value decreased to .4934. This means that size of the family contributes very little to the delinquency proneness. When schooling ($X_7$) as a variable was removed from the regression $R^2$ came down to .4660. And lastly when all the other four independent variables were eliminated and the contribution of neuroticism ($X_3$) was studied $R^2$ came to be .4422. So it can be safely concluded that neuroticism is a single major contributor for delinquency proneness in broken home conditions. It is a powerful predictor of delinquency proneness. It is interesting to note that conflicting views are
expressed about the relationship between delinquency and neuroticism. Chatterji et al (1980), Chatterji and Mukerje (1981) arrived at the conclusion that neuroticism and delinquency are not significantly related. Instead, they recognized two factors viz., parents' affection and presence of mother in the family as factors contributing to delinquency.

In the present circumstances, it may be concluded that out of the five variables studied, only three variables collectively influenced the delinquency proneness. These variables are neuroticism, schooling, and mental ability. The variables which have least predictive ability are size of the family and quarrels among the siblings. These two are considered least related variables. One important observation was that the combination of neuroticism and mental ability explained about 47% of variance of the delinquency proneness. It was conspicuously noticed in the present investigation that in the case of children with broken home conditions the variable which is playing a very insignificant
role is quarrels among the siblings. In the family setting which is already disrupted, the influence of the quarrels among siblings becomes irrelevant.

In view of the above observation it is concluded that the first hypothesis is of questionable nature as far as broken home conditions are considered. Out of five variables only three variables acted as powerful predictors of delinquency proneness. This result is not in the expected direction. Perhaps in the broken home condition, size of the family and quarrels among the siblings play a very insignificant role in the causation of delinquency proneness. The weightage might have been shifted to other relevant variables like neuroticism and mental ability. A peculiar observation noted in the multiple regression analysis was that schooling \(X_1\) whose t-value was significant at .01 level, when all the five variables were involved, became reduced to .05 level of significance when quarrels among the
siblings \( (X_p) \) was removed during the step down regression. The effect of schooling became minimized when quarrels among the siblings was not considered as a variable. This means when there are quarrels among the siblings the role of the school becomes crucial.

b) Multiple regression analysis in non-broken home conditions:

After completing the multiple regression analysis for the subjects with broken home conditions, the multiple regression analysis for the non-broken home conditions is taken up for discussion. In this case apart from the five independent variables, one more independent variable is added to the multiple regression analysis. This variable is disharmony between parents. Now the total number of independent variables considered in multiple regression became six. They are Schooling \( (X_1) \), Neuroticism \( (X_2) \), Mental ability \( (X_3) \), Size of the family \( (X_4) \), Disharmony between parents \( (X_5) \) and Quarrels.
among the siblings \(X_6\). The combined contribution of all these independent variables to the dependent variable (delinquency proneness) and also their individual contributions were investigated to draw relevant conclusions.

The table below gives the correlation matrix for all the six independent variables, \(X_1, X_2, X_3, X_4, X_5\) and \(X_6\) and also the dependent variable \(Y\).

### Table 12

Correlation matrix for the various Independent Variables and the Dependant variable (Non-Broken Home conditions)

\[ N = 121 \]

<table>
<thead>
<tr>
<th></th>
<th>(X_1)</th>
<th>(X_2)</th>
<th>(X_3)</th>
<th>(X_4)</th>
<th>(X_5)</th>
<th>(X_6)</th>
<th>(Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(X_2)</td>
<td>0.0665</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(X_3)</td>
<td>0.1086</td>
<td>-0.1612</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(X_4)</td>
<td>0.0760</td>
<td>0.2411</td>
<td>-0.2589</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(X_5)</td>
<td>0.0165</td>
<td>0.2837</td>
<td>-0.3733</td>
<td>0.5444</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(X_6)</td>
<td>0.0995</td>
<td>0.2417</td>
<td>-0.3603</td>
<td>0.6100</td>
<td>0.5180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Y)</td>
<td>0.2334</td>
<td>0.4978</td>
<td>-0.5006</td>
<td>0.4592</td>
<td>0.5173</td>
<td>0.4186</td>
<td></td>
</tr>
</tbody>
</table>
When the correlations of the various independent variables with the dependent variable are studied, some facts are revealed. Disharmony between parents ($X_g$) is contributing substantially to the delinquency proneness ($r = .5173$). It is significant at .01 level. Next important variable is neuroticism ($r = .4978$). Significant at .01 level). Apart from the above two independent variables, size of the family ($X_4$) also is making an important contribution. It is significantly correlating with delinquency proneness ($r = .4592$). Significant at .01 level). One more independent variable which is correlating moderately is quarrels among the siblings ($X_6$). It is also significant ($r = .4186$). It is proved from the above evidence that relationships in the family play a predominant role in determining the susceptibility to delinquency. One more striking thing in this regard is that mental ability ($X_3$) is negatively correlated with delinquency proneness ($r = -.8006$). This inverse relationship between mental ability and delinquency is an expected result. It is also found that
schooling \( (X_1) \) is making a significant contribution in the origin of delinquency \( (r = -0.2334, \text{ Significant at } .05 \text{ level}) \).

Individual regressors are given below for the non-broken home conditions.

\[
Y = 17.66 + -4.4769 \ X_1 \\
Y = -1.1547 + 0.7411 \ X_2 \\
Y = 30.1697 + -0.6943 \ X_3 \\
Y = 8.7438 + 9.2808 \ X_4 \\
Y = 9.4038 + 9.8715 \ X_5 \\
Y = 8.5758 + 8.8786 \ X_6
\]
Multiple Regression and step down regressions for subjects belonging to Non-broken home conditions

Multiple Regression

\[ R^2 = 0.5384 \]
\[ F = 24.325 \quad (df\ 114,6) \]

<table>
<thead>
<tr>
<th></th>
<th>S. Error</th>
<th>t - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>3.3094</td>
<td>2.9825 **</td>
</tr>
<tr>
<td>( X_1 )</td>
<td>1.2093</td>
<td>3.2744 **</td>
</tr>
<tr>
<td>( X_2 )</td>
<td>0.0981</td>
<td>5.4456 **</td>
</tr>
<tr>
<td>( X_3 )</td>
<td>0.0938</td>
<td>4.3954 **</td>
</tr>
<tr>
<td>( X_4 )</td>
<td>1.6974</td>
<td>1.3591</td>
</tr>
<tr>
<td>( X_5 )</td>
<td>1.5394</td>
<td>2.5438 *</td>
</tr>
<tr>
<td>( X_6 )</td>
<td>1.7374</td>
<td>0.7964</td>
</tr>
</tbody>
</table>
\[ R^2 = 0.5396 \]
\[ F = 29.1554 \quad (df \ 115, \ 8) \]

<table>
<thead>
<tr>
<th></th>
<th>S. Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>3.2437</td>
<td>3.1974 **</td>
</tr>
<tr>
<td>X_1</td>
<td>1.2040</td>
<td>3.3489 **</td>
</tr>
<tr>
<td>X_2</td>
<td>0.0979</td>
<td>5.4766 **</td>
</tr>
<tr>
<td>X_3</td>
<td>0.0935</td>
<td>4.4465 **</td>
</tr>
<tr>
<td>X_4</td>
<td>1.5197</td>
<td>1.9118</td>
</tr>
<tr>
<td>X_5</td>
<td>1.4870</td>
<td>2.6420 **</td>
</tr>
</tbody>
</table>
\text{Step Down}

\begin{align*}
\beta(u) & = 1 \quad 0.25000 \\
R^2 & = 0.4993 \\
F & = 30.91770145 \quad (df \ 116, 4)
\end{align*}

\begin{tabular}{lll}
\hline
 & S. Error & t-value \\
\hline
a & $3.3660$ & $2.7527$ ** \\
x_2 & $0.1017$ & $4.9638$ ** \\
x_3 & $0.0969$ & $4.6459$ ** \\
x_4 & $1.5792$ & $2.1163$ * \\
x_5 & $1.5405$ & $2.5321$ ** \\
\hline
\end{tabular}
\textbf{Step Down}\textbackslash

B(u) = 2  0.25000
\textbackslash
R^2 = .3979
\textbackslash
F = 27.43357393 \ (df \ 117, 3)

\begin{tabular}{lll}
\hline
S. Error & t-value  \\
\hline
a & 2.9355 & 6.6111 **  \\
x_3 & 0.1062 & 4.4763 **  \\
x_4 & 1.7112 & 2.6600 **  \\
x_5 & 1.8820 & 3.0266 **  \\
\hline
\end{tabular}
\textbf{\textit{Step Down}}

\begin{align*}
B(u) &= 3 \quad 0.25000 \\
R^2 &= 0.3008 \\
F &= 26.80663793
\end{align*}

\begin{table}[h]
\centering
\begin{tabular}{ccc}
\hline
S. Error & t-value \\
\hline
a & 1.3079 & 5.6304 ** \\
X_4 & 1.8394 & 2.7728 ** \\
X_5 & 1.7365 & 4.1752 ** \\
\hline
\end{tabular}
\end{table}

\textbf{\textit{Step Down}}

\begin{align*}
B(u) &= 4 \quad 0.25000 \\
R^2 &= 0.2615 \\
F &= 43.48097772
\end{align*}

\begin{table}[h]
\centering
\begin{tabular}{ccc}
\hline
S. Error & t-value \\
\hline
a & 1.1306 & 8.3184 ** \\
5b & 1.4970 & 6.5940 ** \\
\hline
\end{tabular}
\end{table}

** Significant at .01 level

* Significant at .05 level
In the case of non-broken home conditions it is noted down that 54% of the variance of delinquency proneness is due to the combined influence of the six variables under investigation. The $R^2$ is .5384. This is considered to be a substantial contribution.

When the $t$-values are studied, it is concluded that schooling ($X_1$), neuroticism ($X_2$), mental ability ($X_3$) are significant at .01 level. Their $t$-values are 3.2744, 5.4456 and 4.3954 respectively. Disharmony between parents ($X_8$) is significant only at .05 level. Its $t$-value is 2.5438. The two variables viz., size of the family ($X_4$) and quarrels among the siblings ($X_6$) are found to be insignificant factors. Their $t$-values are 1.3591 and 0.7964 respectively.

Further it is noted down that 26% of the contribution in delinquency proneness is made by disharmony between parents ($R^2 = .2616$). That means 26% of the contribution is made by all the other five variables put together. 40% of
the contribution is due to mental ability, size of the family and parental disharmony when they act together \( R^2 = .3979 \). Size of the family and disharmony between parents contributed 20% of the variance of the dependent variable \( R^2 = .3908 \). Close examination of the step down regression further pointed out that only a meagre contribution of 4% of variance is due to the influence of schooling and quarrels among the siblings \( R^2 = .5908 - .4993 \). So schooling and quarrels among the siblings are irrelevant factors in the non-broken home condition.

When multiple regression analysis is carefully perused, it is concluded that when all the six variables act together size of the family \( X_4 \) and quarrels among the siblings \( X_5 \) became the variables with least predictive ability. On the previous occasion also (in the case of broken home conditions) the same phenomenon was exhibited. This proves that whether in the case of broken home condition or non-broken home condition, the size of the family \( X_4 \) and quarrels among the siblings \( X_5 \) are irrelevant factors. When all the independent variables are taken together.
The most important factor in the causation of delinquency proneness is proved to be the disharmony between parents. This finding is corroborating the investigations of Nye (1958); Bandura and Walters (1959); Ainsworth (1962), Glueck and Glueck (1970) who held that delinquency results from a chaotic family life. So an important conclusion arrived from this investigation is that the disharmony between parents ($X_8$) act as a potential factor in delinquency proneness. Another important observation was that size of the family ($X_4$) which was an irrelevant factor when all the six variables were considered simultaneously, turned out to be an important factor when it is considered in combination with disharmony between parents ($X_8$). One explanation that can be offered for this peculiar situation is that naturally when the size of the family ($X_4$) increases, the impact of parental disharmony ($X_8$) may be felt much. Further, a combination of mental ability ($X_3$), size of the family ($X_4$), disharmony between parents ($X_8$) is also considered to be exerting an important influence upon delinquency proneness.
When the first hypothesis is applied to the non-broken home conditions it is concluded that out of the six variables, four variables viz., schooling, neuroticism, mental ability, disharmony between parents are significant contributors for delinquency proneness. Since out of the six variables two variables proved to be irrelevant factors in delinquency proneness, the first hypothesis is conditionally accepted.

In summary, it may be concluded that the hypothesis "Delinquency proneness would be the result of the combined effect of schooling, neuroticism, mental ability, size of the family, disharmony between parents and quarrels among the siblings" is accepted confining it to certain conditions. That is to say that when some irrelevant variables are excluded from the scene, there will be the combined effect of certain psycho-social factors in delinquency proneness. These potential factors are neuroticism, parental disharmony, mental ability and schooling.
2. Delinquency Proneness and Schooling:

It was hypothesized that "Delinquency proneness is negatively related to the schooling". This hypothesis was examined in depth by a comparative study of the delinquency proneness scores of 110 school going children and 110 non-school going children. Analysis of variance of the delinquency proneness scores of the two groups of children are presented in the table below.

Table 14

Summary of analysis of variance of the data on D-P Inventory for the school going and Non-school going children

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>1609.21</td>
<td>1</td>
<td>1609.21</td>
</tr>
<tr>
<td>Within groups</td>
<td>26151.75</td>
<td>218</td>
<td>115.375</td>
</tr>
<tr>
<td>Total</td>
<td>26760.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( F = 13.95 \) significant at 1 percent level.
On closer examination of the results it was found that school going children scored significantly less on D-P inventory when compared to the non-school going children (F = 13.95,  P < .001). This finding is in agreement with the studies carried out by several investigators. In general it is agreed that schooling provides a congenial social atmosphere for the children and this results in the inculcation of right habits among the children. Schooling promotes social conformity. Bloch and Flynn (1950) concluded that "the school imparts knowledge and reasoning skills which enable the children to make practical adjustment to the type of world and community in which they live". Even Robison (1960) asserted that school is a force aimed at the betterment of all those who come under its influence. Neumeyer (1961) believed that school plays a predominant role in the prevention of juvenile delinquency. Glueck and Glueck (1959) are of the opinion that "the schools are in a position to reach children before maladjustment expresses itself overtly or becomes too deeply rooted".
Kvaraceus and Miller (1959) suggested that the school cannot by itself solve the problem of juvenile delinquency. The cooperation of other agencies must be sought in this regard.

While discussing the importance of school as an agency which prevents juvenile delinquency, it is pertinent to note that the quality and nature of schooling must be taken into consideration. Schools which maintain good discipline and opportunities for the wholesome personality development of the children act as insulators in the prevention of delinquency characteristics. So it is logical to conclude that in the school the child by gaining experiences becomes socialized. According to Johnson (1979) "the school as the central arena for the sifting and sorting of adolescent companionships, which prove to be so relevant to the delinquent behavior. To the extent that birds of a feather flock together, the level of attachment to school seems to be the central delinquency - relevant "feathering" criterion."
In the light of the above facts and on the basis of the analysis of the data it can be decisively concluded that schooling will curb and control juvenile delinquency. So the hypothesis that "Delinquency proneness is negatively related to the schooling" is proved beyond doubt.

3. Delinquency Proneness and Broken Home Conditions:

Much importance is attached to the undesirable effects of broken home conditions upon the delinquent behavior. On the basis of the families from which the subjects hailed, they were categorized into two broad groups as follows: broken homes and non-broken homes (intact homes). Broken homes were again divided into four classes viz.,

1) father absent in the family due to death (n=25)
2) mother absent in the family due to death (n=25)
3) both parents absent in the family due to death (n=16) and
4) divorced parents (n=36).
In the case of the first three categories there is the death of one or both of the parents. In the case of the fourth category both the parents are alive but they are separated due to divorce. Five year period of absence was taken into account for counting it as deprivation.

Initially the delinquency proneness scores of the subjects with broken home conditions ($n = 99$) were compared with those of intact home conditions ($n = 121$). ANOVA was carried out to find out the significance of difference of the means between the two groups. The following table represents the results of the analysis of variance.
Summary of analysis of variance of the data on D-P Inventory for the two groups

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>3615.6</td>
<td>1</td>
<td>3615.6</td>
</tr>
<tr>
<td>Within groups</td>
<td>23126.6</td>
<td>218</td>
<td>106.09</td>
</tr>
<tr>
<td>Total</td>
<td>26742.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ F = 34.08 \quad P < .001 \]

From the table 15 it is revealed that delinquency proneness is positively related to the nature of the conditions prevailing at home. The obtained \( F \) of 34.08 indicates that they differ very significantly \((P < .001)\). It is clear that subjects with broken home conditions, because of the lack of proper control over the
children result in delinquent behavior. This finding is corroborating the studies made by Toby (1957); Monahan (1957, 1960) who concluded that the family disruption must be taken into consideration as an important factor in delinquency. Gluecks study (1950) also indicated that all forms of disruption in the family life were more common among delinquents than among the controls. It was also recognized that the death of a parent contributed less to the development of antisocial behavior than separation by divorce. This was also confirmed by the studies of Gardner and Goldman (1945). Nye's (1958) study went a little further to state that there is greater delinquency in unhappy intact homes than in simply broken homes. This study stressed the importance of the quality of parent child relationship rather than the mere presence of the parents at home.

The results of the present investigation are also in agreement with the studies made by Misra (1977) and Shanmugam (1980). They found a definite association between delinquents and their home conditions. After reviewing various
studies on the relationship between broken home conditions and antisocial behavior, Rutter (1971) concluded that the parental discord is an important factor rather than mere broken home conditions.

The results of the present investigation led to the acceptance of the hypothesis that delinquency proneness is positively related to broken home conditions. The 'F' of 34.08 for df 1 and 216 is significant at .01 level.

The broken home conditions were divided into four classes as mentioned earlier. This classification of the broken home conditions was done in order to examine the magnitude of the effect of various modes of deprivation upon the delinquency proneness scores of the children. Kramer's (1956) extension of Duncan's multiple range test was applied for comparing the four groups of children belonging to broken home conditions.
Table 16

Values of $r_p$ and $R_p$ for four groups of Children belonging to broken home conditions with 95 df

<table>
<thead>
<tr>
<th>Groups</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>$r_p$</td>
<td>2.80</td>
<td>2.95</td>
<td>3.05</td>
<td></td>
</tr>
<tr>
<td>$R_p$</td>
<td>5.8</td>
<td>5.68</td>
<td>6.34</td>
<td></td>
</tr>
</tbody>
</table>

Table 17

Summary of the computation of Duncan's range test for the four groups of children belonging to broken home conditions

<table>
<thead>
<tr>
<th>Group</th>
<th>2</th>
<th>4</th>
<th>1</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>14.57</td>
<td>20.57</td>
<td>27.2</td>
<td>35</td>
</tr>
</tbody>
</table>
From the tables 16 and 17 it is evident that the delinquency proneness scores of the children hailing from different broken home conditions are differing significantly. Since the mean difference between groups 2 and 3 (20.43) exceeds the $R_p$ value (6.34), it is proved that group two is significantly different from group 3. Similarly the mean difference between groups 4 and 3 (14.43) is larger than the $R_p$ value (5.68) and the mean difference between 1 and 3 also (7.6) exceeds the $R_p$ value (5.8). So it is demonstrated that the various types of broken home conditions result in various grades of delinquency proneness. In the case of homes where both the parents were absent due to death, the children exhibited greater tendency towards delinquency (Mean delinquency proneness scores = 38). The next in importance comes the children for whom only father is absent in the family due to death (Mean d-p scores = 27.2). In the case of the children hailing from home where there is divorce, mean delinquency proneness scores is less (Mean of d-p scores = 20.57). The least tendency towards delinquency proneness is
shown by children hailing from families where mother is absent due to death (Mean d-p scores=14.57).

The results of the present investigation clearly show that the absence of both the parents from the family is of paramount importance in delinquency proneness. Since home plays a predominant role in the socialization of the child, disruption of the family life will have adverse effects. Temporary absence of father or mother for a small period is of less significance. But the absence of father or mother or both of them for a duration of more than five years will have damaging effects.

Various investigators stressed the importance of the presence of father for the boy and presence of mother for the girl.

Burt (1929) recognized the absence of the mother as of prime importance in delinquency. Andry (1960) pointed out that the role of father is of great significance in the etiology of
delinquency. Similarly Nash (1966); Siegman (1966); Misra (1977); and Sylvester (1972) reported that the presence of father is of greatest importance in the causation of delinquency. Usually boys identify with their fathers and when the father is absent from the family for a long duration, it will have undesirable effect upon the normal personality development of the children. They will lack a proper model to emulate.

From the analysis of the results of the present study it is concluded that the absence of both the parents caused an increase in the score on delinquency proneness. Next in the order of importance comes absence of the father, then comes divorce in the family and lastly absence of the mother. Quay (1968) rightly said "the effective character of the parent-child relationship is of prime significance in determining the social motives which participate in the determination of delinquency."
In view of all these above facts it is concluded that broken home conditions, especially the absence of father and divorce will cause delinquency proneness. So the hypothesis that "delinquency proneness is positively related to broken home conditions" is accepted.

4. Delinquency Proneness and Neuroticism:

The relationship between delinquency and neuroticism was probed by several investigators. Almost all the studies unequivocally concluded that there is a positive relationship between neuroticism and delinquency. Studies made by Cattell et al (1970); Burgess (1972); and Eysenck (1974); suggested that extraversion and neuroticism are the two main causal components of delinquent personality. This contention was, however, questioned by Shanmugam (1962), Hogluchi and Forest (1970); and Chatterjee (1980).
The hypothesis that "Delinquency proneness is positively related to neuroticism" was subjected to verification. Neuroticism Scale was administered to all the subjects (110 school going children and 110 non-school going children). The means and standard deviations of the neuroticism scores of the subjects were computed. (Mean = 23.7; S.D = 7.11). Subjects who scored above mean +1 standard deviation (Above M + 1 S.D) were designated as subjects with high neuroticism group. Similarly subjects who scored below mean + one standard deviation (below M + 1 S.D) were taken as low neurotic group. The delinquency proneness scores of these two groups were entered and t-test was applied to find out whether there is any significant difference between these two groups on the delinquency proneness scores. The results are indicated in the following table.
Table 16

Significance of Difference between the mean delinquency proneness scores for the two groups of Children

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>S.D.</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High neurotic group</td>
<td>47</td>
<td>30.89</td>
<td>7.4</td>
<td>12.01</td>
</tr>
<tr>
<td>Low neurotic group</td>
<td>45</td>
<td>11.8</td>
<td>11.8</td>
<td></td>
</tr>
</tbody>
</table>

Significant at .01 level

Examination of the results showed a significant relationship between neuroticism and delinquency proneness. The obtained t-value is 12.01. It is significant at .01 level. It is evident from the results that neuroticism is directly proportional to delinquency proneness: the subjects with high neuroticism exhibit high delinquency proneness and low neuroticism exhibit low delinquency proneness.

Coefficient of correlation by product moment method was computed for the scores on neuroticism
and delinquency proneness. The $r$ came to be 0.61. This positive relationship between the two variables was found to be a significant one.

The results of the present investigation are corroborating those studies made by several Indian as well as investigators from abroad. In India Singh (1951), Kundu and Bhoumik (1982), and Sharif and Sekher (1982) believed that neuroticism plays a vital role in delinquency. The present investigation supports this contention. The obtained results suggest a positive relationship between neuroticism and delinquency proneness. Hence the hypothesis viz., "Delinquency proneness is positively related to Neuroticism" is upheld.

The relationship between delinquency and neuroticism needs little explanation since both these variables result from a disorganized personality structure. Naturally there will be a close association between these two factors. Due to poor socialization and maladjustment the neurotic person is often prone to delinquency.
5. Delinquency Proneness and Mental Ability:

A lot of controversy exists regarding the relationship between delinquency and intelligence. Much disagreement prevails among the researchers about the relationship between these two variables. While some researchers over emphasized the role of mental ability in delinquency, others found it to be very insignificant. Most of the studies stressed the negative relationship between delinquency and mental ability. Goring (1913), Burt (1929), Sharma et al (1932) and many others argued that delinquency results from low mental ability. Interestingly Bovet (1951) critically examined the relationship between delinquency and intelligence and held that it is only intellectually inferior delinquents who are caught and confined to the institutions.

The hypothesis that "Delinquency proneness is negatively related to mental ability" was tested
in the following manner. Raven's Standard Progressive Matrices test was administered to 220 subjects (110 school going and 110 non-school going children). On the basis of the scores obtained by the subjects they were grouped as subjects with high mental ability ($N = 45$) and subjects with low mental ability ($N = 36$). The subjects who scored above mean $+ 1$ standard deviation (above mean $+ 1$ S.D) were taken as subjects with high mental ability and the subjects who scored below mean $- 1$ standard deviation (below mean $- 1$ S.D) were designated as low mental ability group (Mean = 20.63; S.D. 6.71). The delinquency proneness scores of these two groups were entered separately and the significance of difference between the means was computed using $t$-test. The table below depicts the results.
Table 19

Summary of analysis of variance of the data on Delinquency Proneness Inventory for the two groups (High mental ability group and Low mental ability group)

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>3192.08</td>
<td>1</td>
<td>3192.08</td>
</tr>
<tr>
<td>Within groups</td>
<td>7494.81</td>
<td>79</td>
<td>94.87</td>
</tr>
<tr>
<td>Total</td>
<td>10686.89</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>33.65</td>
<td></td>
<td>P &lt; .001</td>
</tr>
</tbody>
</table>

It would be seen that the F-value = 33.65 is significant at .01 level. This suggests that mental ability is inversely proportional to delinquency proneness; the subjects with low mental ability scored high on delinquency proneness, whereas the subjects with high mental ability scored low on delinquency proneness.

To confirm the above finding, another procedure also was followed by examining the mental ability scores of subjects with high delinquency proneness scores (above M + 1 S.D., N = 45) and subjects with low delinquency proneness...
scores (below M-1 S.D, N=47). F-test was applied to find out the significance of difference between the means of two groups on the mental ability scores. Table 20 represents the data.

Table 20
Summary of analysis of variance of the Data on mental ability scores for the two groups (High Delinquency Proneness Group and Low Delinquency Proneness Group)

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>1336.45</td>
<td>1</td>
<td>1336.45</td>
</tr>
<tr>
<td>Within groups</td>
<td>3266.20</td>
<td>90</td>
<td>36.31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4604.65</td>
<td>91</td>
<td></td>
</tr>
</tbody>
</table>

\[ F = 36.81 \] Significant at .01 level

It was found from Table 20 that the two groups differed significantly on the mental ability. Obtained value of \( F \) is 36.81. It is significant at .01 level.
Taken together tables 19 and 20 suggest that there is negative relationship between delinquency proneness and mental ability. So it is concluded that the hypothesis "Delinquency Proneness is negatively related to mental ability" in question is proved to be correct.

A plausible explanation that can be offered for the negative relationship between intelligence and delinquency proneness is that the lack of intelligence leads to inability to adjust to the environment properly. And this in turn, causes a tendency to become delinquent. It is appropriate to mention in this connection the statement of Combs and Snygg (1958) which runs as follows:

"Intelligent behavior is behavior which effectively and efficiently satisfies the need of an individual and his society". So a person with high intellectual endowment can cope with his problems successfully.

Another assumption is that the intelligent children while responding to the items on the
Delinquency Proneness Inventory, might have avoided those items which clearly indicated delinquent tendencies. Thus they are driven to score less on the D-P Inventory.

6. Delinquency Proneness and Disharmony between Parents:

Parents at home constitute an important factor in the socialization of the child. Naturally the child identifies with both the parents. When the relationship between parents is discordant, the child is put in an awkward position. Parental disharmony is considered as an important factor in delinquency proneness.

In the present investigation an attempt is made to find out the relationship between these two variables viz., delinquency proneness and disharmony between the parents. On the basis of the relationships existing between the parents, the families of the subjects were divided into two
categories. The first category comprises of children whose parents have harmonious relationships between themselves. The second category consists of the subjects whose parents exhibit disharmony. The delinquency proneness scores of these two groups of the subjects were noted down separately. The test was applied to find out the significance of the difference between means of the two groups. The results are indicated in the following table.

Table 21

Significance of difference between the Mean Delinquency Proneness scores for two groups of Children

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects from families with Disharmonious relationship between parents</td>
<td>70</td>
<td>18.76</td>
<td>6.25</td>
</tr>
<tr>
<td>Subjects from families with Harmonious relationship between parents</td>
<td>51</td>
<td>9.33</td>
<td></td>
</tr>
</tbody>
</table>

Significant at .01 level
Examination of the above table shows that there is significant difference between the mean delinquency proneness scores of the two groups of subjects. The obtained value of \( t \) is 6.25. It is significant at .01 level. The results indicate that there is a positive relationship between disharmony between parents and delinquency proneness.

The results of the present study are supporting the findings of Bandura and Walters (1969), Ainsworth (1962) and Glueck and Glueck (1970) who stressed the role of a chaotic family life in delinquency. According to them "living divorce" where the parents live together but hate one another is disastrous to the harmonious development of the personality of the children. Rutter (1971) also supported the view. McCord, McCord and Zola (1959) concluded that a quarrelsome and neglectful family was conducive to criminality.

It is concluded that the basic foundation for the personality development of the child
is made at home. The cohesiveness and smooth
sailing in the family lead to a feeling of
security and belongingness. If it fails to
foster a healthy atmosphere it results in
drastic changes in the personality development
of the child. So it is concluded that juvenile
delinquency originates as a symptom of
disorganized home.

In the light of the above findings the
hypothesis that "Delinquency Proneness is signi-
ficantly related to disharmony between parents" is accepted.

7. Delinquency Proneness and Quarrels among the siblings

Precise little research work is carried
out in this area. What applies to disharmony
between the parents also applies to lack of
cordial relationships among the siblings in the
family. It is expected that the more discordent
relationships exist among the siblings the more
will be delinquency proneness score. To examine
this hypothesis the subjects were classified into two divisions. The subjects who maintained harmonious relationships with the other siblings constituted one group. In the other group were included the subjects who had quarrels among the siblings. The delinquency proneness scores of these two groups were compared using t-test. Table 22 shows the results.

Table 22

Significance of difference between the mean delinquency proneness scores for two groups of children

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarrelsome siblings</td>
<td>162</td>
<td>20.86</td>
<td>5.69</td>
</tr>
<tr>
<td>Non-quarrelsome siblings</td>
<td>45</td>
<td>11.22</td>
<td></td>
</tr>
</tbody>
</table>

Significant at .01 level
Analysis of the data led to the conclusion that there is a positive relationship between the delinquency proneness scores and quarrels among the siblings. The mean delinquency proneness scores of the subjects whose siblings were quarrelsome (Mean = 20.86) is significantly more than the subjects whose siblings lacked quarrelsome behavior (Mean = 11.22). The obtained t-value is 5.69. It is significant at .01 level. It is evident from findings that quarrelsome behavior in the home, whether between parents or among the siblings, leads to delinquency proneness. When there are cordial relationships between the siblings, the children develop a healthy outlook towards life. This arouses a feeling of security in the minds of these children. When the children are deprived of protected and secured life at home, where can they expect proper care and protection for them?

The results support the assumption that "Delinquency Proneness is positively related to quarrels among the siblings."
8) Delinquency Proneness and Size of the family

Most of the studies dealing with the relationship between delinquency and size of the family concluded that large families are responsible for delinquency. Nye (1958), Cowie et al (1968), Bills (1971), Geeta Rao and Anima Sen (1979) and Shanmugam (1980) supported the above contention. A combination of a large family with low-economic resources was considered to be a major characteristic in delinquency (Geeta Rao and Anima Sen; 1979).

Based upon the above observations it was hypothesized that "Delinquency Proneness is positively related to size of the family". In order to examine this hypothesis the size of the family of the subjects was studied. The subjects were classified into two categories, those with more than 4 members in the family were grouped as belonging to large family and those with less than four members in the family
as belonging to small family. The delinquency
prominence scores of these two groups of subjects
were noted down. t-test was computed to find
out the significance of difference between the
mean scores of these two groups. Table 23 shows
the results.

Table 23

Significance of difference between the Mean Delinquency
Prominence Scores for two groups of children

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Mean</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>subjects from</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>large families</td>
<td>47</td>
<td>30.89</td>
<td></td>
</tr>
<tr>
<td>subjects from</td>
<td></td>
<td></td>
<td>9.87</td>
</tr>
<tr>
<td>small families</td>
<td>31</td>
<td>13.16</td>
<td></td>
</tr>
</tbody>
</table>

Significant at .01 level
The $t = 9.67$ is significant at .01 level concluding that there is significant difference between the mean delinquency proneness scores of subjects belonging to large families and those belonging to small families. The mean is $30.89$ in the case of large families. It is greater and establishing the fact that children from large families showed more vulnerability to delinquency. On the basis of the analysis of the data it is concluded that delinquency proneness is positively related to the size of the family and so the hypothesis that "Delinquency Proneness is positively related to the size of the family." is proved to be correct.

In a large family, especially with a low socio-economic status the needs and requirement of the children cannot be properly attended. There will be frustrations among the children and they crave for more and more attention. To compensate for this deficiency the children may develop negative attitude and hostility towards
the society. They try to take revenge against the family members as well as the society in general through their undesirable behavior.

9. Delinquency Proneness and Order of Birth-

Several interesting studies were carried out to know the relationship between the order of birth of individual and delinquency. Schachter (1959), Hilton (1967), Koller (1971), Rothbart (1971), Meld (1976), Sharma et al (1982) held that the middle born children were more prone to delinquency. Whereas Miller (1944) and Berg (1967) suggested that the first born children are more inclined to become delinquents. Sletto (1934) stated that only children lack parental control. As there are different opinions, an attempt was made to probe into the controversy.

Hypothesizing that delinquency proneness is significantly related to order of birth, an investigation was made to assess the relationship between the two variables viz., delinquency pron-

...
ness and order of birth. The subjects were arranged into four categories on the basis of their order of birth. They are 1) only children 2) first borns 3) middle borns and 4) last borns. After identifying the subjects belonging to the above categories their delinquency proneness scores were listed. The results were subjected to Duncan's multiple range test table 24 and 25 indicates the results.

Table 24

Values of $r_p$ and $R_p$ for four groups with 216 df

<table>
<thead>
<tr>
<th>Groups</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>$r_p$</td>
<td>2.77</td>
<td>2.92</td>
<td>3.02</td>
</tr>
<tr>
<td>$R_p$</td>
<td>3.19</td>
<td>6.6</td>
<td>5.31</td>
</tr>
</tbody>
</table>
Table 25

Summary of the computation of Duncan's multiple range test for the four groups of children

<table>
<thead>
<tr>
<th>Group</th>
<th>2</th>
<th>1</th>
<th>4</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>11.5</td>
<td>13.33</td>
<td>19.66</td>
<td>21.73</td>
</tr>
</tbody>
</table>

From the results of the multiple range test it is clear that the middle born children are more susceptible to delinquency. Their mean is 21.73. Next in the order comes the last born children (Mean = 19.86). There is no significant difference between these two categories since the mean difference 1.97 does not exceed the $R_p$ value 3.19 for the comparison. The results indicate that first born children are less prone to delinquency than other categories. Their mean is 11.5. Why
the middle born children exhibit a tendency
towards delinquency needs an explanation. The
first born and last born children usually get
the attention of the parents. It is only the
middle born children who crave for love and
affection from their parents. This arouses
a feeling of jealousy and frustration.
Consequently the individual exhibits delinquent
behavior. One more thing is that often the
first born children are automatically required
to discharge some responsibilities in the family
situation. So there is less scope for them to
develop delinquent tendencies. The investiga-
tion of Lee, Newson (1954) stresses that
eldest children tend to commit individual
offences and intermediates tend to commit group
offences. In the case of the only children
undue attention is paid by the parents and other
members in the family. They are pampered and
over protected. This type of treatment meted
to them results in inadequate adjustment,
emotional instability, exclusiveness etc. They become easy prey to undesirable behavior.

Closer examination of the results support the assumption that "Delinquency Prone-ness is significantly related to order of birth."