CHAPTER 2

MATERIAL AND METHODS

Area of Field Work

The data have been collected from the two districts of Chamba and Kangra, which have the largest concentrations of seminomadic and settled Gaddis respectively, in Hamachal Pradesh.

Sampling

The stratified sample has been drawn from two strata of the Gaddi population, viz. the educated and the non-educated ones. A sample of fifty families from each stratum in each of the two districts has been taken. The families from each of the two strata have been selected on a random basis, depending upon the availability of educated households. The total sample for the study is constituted of 100 educated and 100 non-educated households.

Character of the Universe

(i) Since the two districts are sparsely populated and the number of educated Gaddis is small, the sample size too is small. A 2.5 per-cent sample has been drawn from among the educated families and an equal sample of non-educated families have been drawn from the two districts.

(ii) Since there are about two thousand Gaddis in Chamba district, who are educated up to the Primary level and
above and only 50 of them could be found available so, a sample of 50 educated respondents (one from each family) has been drawn for interviewing and data collection in this district. Similarly, 50 non-educated respondents (one from each family) have been interviewed in this district. On the same pattern, an equal sample of both educated and non-educated members from the Kangra district have also been interviewed. Thus, a total of one hundred educated and one hundred non-educated Gaddi families have been interviewed in the two districts.

Methodology and Tools of Research

(i) An educated family for the purpose of the study is a family, whose 'Head' or any other member is educated up to the primary level, preferably middle level and above. The break-up of the educational levels of the Heads or other members of the educated households interviewed in the two districts is given in Table 2.1.

(ii) Cultural traits of each of the indicators of social change mentioned earlier, viz. demographic and socio-economic aspects, have been chosen for the purpose of interview and included in the schedules.
TABLE 2.1

EDUCATIONAL LEVELS OF THE RESPONDENTS

<table>
<thead>
<tr>
<th>Total No. of educated respondents</th>
<th>Below Middle</th>
<th>Middle</th>
<th>Under Matric</th>
<th>Matric</th>
<th>Matric with JBT</th>
<th>Higher Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>17 (17.0)</td>
<td>11 (11.0)</td>
<td>16 (16.0)</td>
<td>20 (20.0)</td>
<td>12 (12.0)</td>
<td>2 (2.0)</td>
</tr>
<tr>
<td>Intermediate</td>
<td>2 (2.0)</td>
<td>17 (17.0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-graduate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3 (3.0)</td>
</tr>
</tbody>
</table>

Note: Figure in parentheses indicate percentages.

(iii) One hundred non-educated families have also been selected randomly. The comparison between the educated and the non-educated families has helped us analyse the effect of education.

(iv) A schedule to elicit data on demographic aspects has been prepared. (Appendix 2).

(v) A schedule to elicit data on the socio-economic aspects has been prepared (Appendix 3).

(vi) The questions in the two schedules are open end as well as close end. (Appendices 2 and 3).
(vii) Participant and non-participant observation method has also been adopted during collection of data, wherever possible.

(viii) A few case studies, wherever necessary, have also been taken in support of their responses and given in Appendix 1.

Data Analysis

The data collected have been codified, tabulated, statistically analysed and interpreted in the various chapters. Chi square ($x^2$) formula has been applied for testing agreement between the observed and the expected results.

$$x^2 = \sum \left( \frac{fo - fe}{fe} \right)^2$$

$fo$ - observed frequency of occurrence, experimentally determined facts;
$fe$ - expected frequency of occurrence.

Standard Deviation formula has been used wherever necessary.

$$S.D. = \frac{\sum (Average - Each Reading)^2}{N}$$

The following formulae have been used during analysis of demographic aspects.

Age Specific Fertility Rate (ASFR)

The average number of children born alive during the last year per woman of a particular age group.
Total Fertility Rate (TFR)

Total number of children that would have born alive per woman, had the current schedule of age specific fertility rates been applicable for the entire reproductive period. It is calculated as the sum of the age specific fertility rates in five year age groups multiplied by five.

\[ TFR = \text{ASFRs in Five year Age Groups} \times 5 \]

General Fertility Rate

The number of children born alive during the last year per 1,000 women of child bearing ages.

Crude Death Rate

Number of deaths per 1,000 persons per year.

Morbidity - Deaths due to diseases.

Sex Ratio

Sex Ratio is the number of females per thousand males.

Illustrations

Maps, Histograms, Pie diagrams and graphs have been given where felt necessary.