



CHAPTER 4
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4.1 SCOPE AND COVERAGE

The scope of this study is to focus on the information needs of Lodha community on the basis of their socio-economic aspects in Paschim Medinipur. Paschim Medinipur district has three sub-divisions: Ghatal, Kharagpur, Midnapore Sadar. The Lodha population is found in the following blocks of three sub-divisions of Paschim Medinipur district:

- I. Ghatal Sub-division - Daspur I.
- II. Kharagpur Sub-division - Dantan I, Dantan II, Debra, Keshiary, Kharagpur I, Kharagpur II, Narayangarh, Pingla, Sabang.
- III. Midnapore Sadar Sub-division - Keshpur, Midnapore Sadar, Salboni.

From the above-mentioned areas, one block from each sub-division is covered in this study. Then from each block, two mouzas are selected by random sampling method. Therefore from the three blocks total six mouzas are covered. It is found that the total Lodha population of six mouzas is 854. Here only the adult Lodha population which is 533 has been taken for the study.

4.2 METHODS USED

This study is based on structured (formal) methods like written questionnaires and verbal interviews and unstructured (informal) method which includes observation. The sample size is determined by the adult Lodha population by selecting at least one block from each sub-division to avoid any biases. As Ghatal sub-division has only one block, Daspur I, so by default this has been selected. Multistage random sampling method has been applied for selecting the sample (Rohlf and Sokal 172). First by

arranging the sub-divisions alphabetically and then arranging the blocks alphabetically and applying the multistage random sampling the blocks selected for the study are Daspur I, Keshiary, and Salboni. Again in all the blocks, the mouzas are arranged alphabetically and in similar random sampling method the mouzas which got selected for the study are Brindabanpur and Manikpur in Daspur I block; Chandana and Senna in Keshiary block; Baghmari and Pirchak in Salboni block. Then the adult population which is considered as the sample here has been confirmed from the voters' list available from Block Development Office (BDO) of the selected areas. It comes out to be 533.

The study uses Cochran's formula for determining the sample size. Cochran developed a formula to calculate a representative sample, when the population is infinite. The formula is given as $n_0 = z^2 pq / e^2$, where n_0 is the sample size, z is the selected critical value of desired confidence level, p is the estimated proportion of an attribute that is present in the population, $q = 1 - p$ and e is the desired level of precision (Cochran 75).

For example, suppose we want to calculate a sample size of a large population whose degree of variability is not known. Cochran considered a population of more than 10,000 as large. Assuming the maximum variability, which is equal to 50% ($p = 0.5$) and taking 95% confidence level with $\pm 5\%$ precision, the calculation for required sample size will be as follows- $p = 0.5$ and hence $q = 1 - 0.5 = 0.5$; $e = 0.05$; $z = 1.96$

Then

$$n_0 = \frac{(1.96)^2(0.5)(0.5)}{(0.05)^2} = 384.16 = 384$$

Total Lodha population of Paschim Medinipur is 60,136 (approx). Therefore, this sample size of 533 taken in this present study is sufficient.

REFERENCES

Rohlf, James F., and Sokal, Robert R. *Statistical Tables*. 3rd ed., W. H. Freeman and Company, 1994.

Cochran, William G. *Sampling Techniques*. Wiley, 1977.