CHAPTER III

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METHODOLOGY

In this study a cross-sectional survey was carried out to study the psycho-social determinants of fertility.

3 1 Study Area

In India, Community Development Blocks (CDB) is the smallest administrative unit for implementing rural development programmes. It was therefore decided to conduct the study in one of the CDB’s. Athoor Block is situated in Dindigul District of Tamil Nadu with an area of 23625 hectares (APPENDIX-C). This block has experienced remarkable decline in its fertility levels since the late 1950s. Surveys conducted in this block using different norms shows that crude birth rate (CBR) in this block was 43.1 in 1959 and it declined to 25.6 by 1984-85 (Rajaretnam, 1996). In Athoor Block, a number of intensive health and family planning programmes were undertaken since the late 1950s. From 1962, with the introduction of extension approach to family planning programme at the all India level, the Gandhigrarn Institute of Health and Family Welfare Trust, Gandhigrarn, was carrying out extensive health and family
planning activities in this block. In 1965, the family planning programme in this block was integrated with maternal and child health programme with one auxiliary-nurse-midwife (ANM) for 5,000 population. A number of approaches were tried in the implementation of health and family planning programme in this block. While evolving approaches, much attention was paid to developing and implementing the programme in a phased manner, placing more emphasis on extension education and making available the services nearer to the public.

Athoor Block is situated in Dindigul district of Tamil Nadu with an area of 23625 hectares. This block consists of three town panchayats and twenty one villages with a total population of 113183 with male population of 56918 and female population of 56265. The male literacy was 60 percent and female literacy was 39 percent. The scheduled caste population was 24 percent. There were 53 percent male workers and seventy three percent of female workers were agricultural labourers.
3.2 Study Sample

In order to achieve the objective of the study it was decided to collect data from 470 eligible women who are currently married women in the reproductive ages 15-49 years. The formula used for calculation of minimum sample size is given below.

\[
\left( \frac{Z_{\frac{\alpha}{2}}}{\sqrt{\frac{PQ}{L^2}}} \right)^2
\]

*Where* \( Z_{\frac{\alpha}{2}} \) = Normal deviate value at \( \alpha \) level of significance

\( \alpha = 5\% \) level of significance

\( P = \) Anticipated lowest prevalence of 45% 

\( Q = 1-P \)

\( L = 10\% \) of \( P \)

By using the above formula the minimum sample size comes to be 470 eligible women. In order to avoid non-response an additional 30 women were included. Thus it was desired to interview 500 eligible women in the reproductive age group of 15-49 years.
3.3 Sampling Design

A multistage stratified random sampling was adopted for this study. At the first stage the villages in the block were selected. The total number of ever married women aged 15-49 years in all the 21 villages of the Athoor Block was collected first.

The villages were stratified into three groups based on the number of ever married women (< 500 women, 500 -1000 women and 1000 to 1500 women). From each group two villages were randomly selected. Thus a total of six villages were randomly selected. At the second stage the number of eligible women to be selected in each village was determined using probability proportional to size (PPS) of the eligible women (Table 3.3). Within the village the eligible women for the study were selected using linear systematic method: i.e., after randomly selecting one household with eligible women the next woman is selected by visiting the 10th household in that row and if an eligible woman was not present in that household the adjacent household was selected. Thus for all the villages a sampling interval of 10 households was used.
Table S.3
Stratification of villages and number of women selected in each village

<table>
<thead>
<tr>
<th>Number of Eligible women</th>
<th>Villages</th>
<th>Total Ever married women</th>
<th>Selected women</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (1000-1500)</td>
<td>Sitharevu</td>
<td>1201</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>Ayyampalayam</td>
<td>2063</td>
<td>197</td>
</tr>
<tr>
<td>Medium (500-1000)</td>
<td>Athoor</td>
<td>552</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Seevalasaragu</td>
<td>610</td>
<td>59</td>
</tr>
<tr>
<td>Low (1-500)</td>
<td>Alamarathupatti</td>
<td>350</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Palyamkottai</td>
<td>438</td>
<td>42</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5214</td>
<td>500</td>
</tr>
</tbody>
</table>

3.4 Tools used

A standard pre-tested interview schedule was used to collect data from all the eligible women in all the selected villages.

The schedule consisted of open ended questions and pre-coded questions. It included questions relating to socio-economic, demographic and psycho-social variables such as economic value of children, social value of children, inter-spouse communication, and communication received from health personnel and media and perception on contraception. Psycho-
social variables were measured using five point Likert scale, these questions were mixed in order to get good response to all the questions form the respondent.

The draft schedule was pre-tested in one of the villages of Athoor block and the corrections were incorporated before finalizing the schedule for main survey.

3.5 Variables

For the present study, fertility was the main dependent variable which has been represented by the children ever born (CEB)

The following psycho-social determinants have been considered as the major independent variables for the study.

0 Economic value of children
0 Social value of children
0 Inter-spouse communication
0 Information education and communication
0 Perception on contraception

The other independent variables consisted of social, economic, and demographic factors which are stated below
Social Variables

Education - Education status of the respondent.

Type of Family - Family type (Joint or Nuclear).

Religion - Hindu, Christian and Muslim.

Caste - Scheduled caste and Other backward caste.

Earlier residence - Residence before marriage.

Type of marriage - Consanguineous and non-Consanguineous.

Women’s Autonomy - Women need permission from husband.

Occupation - Occupation during last 12 months

Economic variables

Land holding - Possession of agricultural land.

Family Income - Total family monthly income.

Household Amenities - Household items including toilet and drinking water facilities

Type of house - Kachcha, Pucca and Semi-pucca house

Live stock - Live stock holding

Demographic variables

Age - Current age of respondent

Age at marriage - Age of the respondent at the time of marriage.

Child loss - Children dead
Psycho-social variables

Economic value of children

Labor value of children

Economic asset to the family

To take care of young child

Social value of children

Children as a bond of family life and marriage

Bearing and rearing children are natural

Children are source of joy and pleasure

Women demonstrate the femininity by having children

Men produce children to prove their masculinity

Family size and future fertility preference

Ideal number of children

Desired sex composition of children and preference for boy

Spacing children

Future preference of children

Inter-spouse communication.

Contraceptive decision

Difference in parity decision between spouses
Education of children

Future plan for education of children

Communication received from health personnel and media

Media exposure

Programme personnel contact

Message on small family and contraception

Communication with others

Perception on contraception

Knowledge and attitude towards contraception

Source of knowledge

Adoption of contraception

Person motivated for contraception

Abortion as a contraceptive method

3.6 Field work and Data collection

After finalizing the schedule, the respondents were contacted at their residence and the data for the study were collected through personal interview. The respondents were given enough time to recall the events and the answers were obtained for all the questions. For psycho-social statements the literate
respondents were requested to give their answers on a five point scale. The field survey was carried out for a period of four months (June 2002 to September 2002) in order to complete the data collection form 500 respondents in six villages of Athoor block.

3.7 Method of analysis

3.7.1 Data entry and coding

The collected data were properly coded for open ended questions and properly edited for consistency errors. The data were entered into the computer using the package foxpro2.5.

3.7.2 Index used for Independent variables

The variable standard of living was converted into standard of living index by giving appropriate scores (Roy and Jeyachandran, 1999) from several other variables (Appendix B). Several questions collected under other variables namely social value of children, economic value of children, Inter-spouse communication, Information Education and Communication and perception on contraception were given appropriate scores while analyzing it with the dependent variable the children ever born (CEB) and is given below.
Economic Value of Children (ECO): The respondents who agreed to the selected statements like, More children will contribute to family income, Children will support parents at old age, Elder children will take care of younger children, Children will help in work were taken and those who fully agreed will get a score of 5 to those who fully disagreed will get a score of 1.

Social Value of children (SQG): The respondents who agreed to the social value statements were taken as it is in the five point scale that is those agreed will have low score of 1 and those disagreed will have high score of 5.

Inter-spouse communication (JINX): The respondents who fully agreed to the inter-spouse communication like “Discussed with husband about how many children want, Discussed about the sex of the children and discussed about the contraception with husband” were given high score ie 5 and those who fully disagreed will get low score i.e 1.

Information Education, and communication (IBC): The respondents who fully agreed to the IEC like “Heard about small family in radio or television, Heard about contraception,
Heath workers discussed about small family and Health workers discussed about contraception” will get high scores i.e 5 and who were fully disagreed will get low scores that is 1.

Perception on contraception. **(CON):** The respondents who fully agreed to the statements of perception on contraception statements like “Contraception is for limiting children, Contraception can be used for spacing between children, Contraception is a safe method, contraception can be immediately used after marriage” were given high scores that is 5 and who were fully disagreed to these statements were give low scores that is 1.

3.7.3 Data Analysis

The analysis of data was carried out using Statistical Package for Social Sciences 9.0 (SPSS). The un-variate analysis was done to obtain the percentage distribution of the background characteristics and the association between independent variables with that of children ever born (less than or equal to 2 and more than 2) after controlling the effect of age of women. Stepwise multiple regression analysis was carried out in order
to find out the significant variables that are related with the dependent variable. The logistic regression technique was applied to understand the factors responsible for higher number of children ever born (greater than 2).