CHAPTER-3
RESEARCH METHODOLOGY

Research methodology is defined as “a body of methods, rules and postulates employed by a discipline”, “a particular procedure or set of procedure or “the analysis of the principles or procedure of inquiry in a particular field” (Encyclopedia Britanica 2007). This chapter describes the methods of investigation for the collection of data in light of the objectives. Further, it includes the statistical tools and techniques employed to analyze the data. This methodology discussed under the following subheads.

- Research Design
- Locale of the study
- Population and sample of the study
- Variables under study
- Tools and techniques for data collection
- Procedure of data collection
- Analysis of data

3.1 Research Design:

This study has been planned on the basis of normative survey method of research, which is fact finding with adequate interpretation in the light of the norms. Questionnaire and interview techniques were used for survey.

3.2 Locale of the study:

The census 2001 reveals that since Independence Rajasthan has continued to maintain its record of registering one of the highest population growth rates in the country. If the current growth rate continues than population will be doubled from its current size and reaching a staggering figure of more than 11 crore before the year 2030. This rapid pace of population growth will exert a tremendous pressure on the labor market and their social Institutions. This also affects the economic growth and
the delicate ecosystem of the state. Thus curbing the rate of growth of population of the state and stabilizing its population size, is a dire necessity. Keeping this in mind it was decided to conduct study in Rajasthan state of India.

The area of study must be determined, so that the whole procedure does not become lengthy and affect the item setting during study. This study was carried out in Tonk district of Rajasthan state. The area was purposefully selected by the researcher because of the following reasons -

Firstly, Tonk district provides somewhat urban as well as rural settings and people from different SES and cultural background. It is situated at a distance of about 82 km from Jaipur, the capital of Rajasthan. The district is bordered by Bhilwara and Bundi districts in the south, Jaipur in the north, Ajmer in the west and Sawai Madhopur in the east. Secondly, it was convenient for researcher to contact and collect required information as well as conduct interviews and verification of facts, if needed.

3.3 Population and Sample of the study:

Population of the study comprised of married couples (only those who have been married between 2001 – 2010). It is practically not possible for a researcher to study all the units in the area of research. To reduce bias and obtain accuracy in the research, it is important to make use of a proper sampling method. A good sample not only needs to be representative, it needs also to be adequate or of sufficient size to allow confidence in the stability of its characteristics.

Purposive sampling method was used to select sample. Purposive sample is a non random sample in which researcher uses a wide range of methods to locate all possible cases of a highly specific and difficult to reach population. In India, gender inequalities favors men and; sexual and reproductive health decisions are usually made by them. Therefore, there is a growing realization that unless men are reached, the family welfare efforts will be in vain.
Keeping this perspective in mind it was decided to include couples in the study, so to seek attitudes of both men as well as women. Moreover, there is a vast difference in various factors of community based social influence, so respondents were selected from rural as well as urban area.

**Sample Size and sampling procedure:**

Multistage sampling design was adopted to conduct this study. A purposive sample of six hundred urban couples from Tonk district, divided in six blocks—namely Tonk/Peeplu, Newai, Aligarh/Uniara, Malpura, Todarai singh and Deoli, (100 from each block) was selected from different block headquarters through snowball method. The researcher visited Government offices such as the Municipal Corporation and electoral office, educational institutions, hospitals to get information about couples married between 2001 to 2010. Couples were also asked further to give names of other couples till desired number was obtained.

For selecting rural couples, 60 villages (10 from each block) were selected randomly from the list of villages (list of selected villages picked up from each block has been given in Appendix I).

20 couples from each village were further selected from the couples’ list, available with ANM of the respective village as well as further information about others couples, provided to the researcher by contacted couples. A sample of 600 rural couples was obtained through this procedure.

Willingness to participate (both husband as well as wife) in the study was a requisite for inclusion of couples in the sample. They were also assured for confidentially of their responses. Those couples not willing to participate or one of the spouse non willing were not included in the study.

Hence, total sample for the study comprised of 2400 respondents (1200 couples - 600 rural and 600 urban). Efforts were made to include couples from different strata. Sample and procedure have been summarized in the following diagram.
Figure 3.1: Sample Selection at a glance

- **Tonk District**
  - **6 Blocks**
    - **Newai** 200 Couples
    - **Malpura** 200 Couples
    - **Tonk/Peeplu** 200 Couples
    - **Todarai Singh** 200 Couples
    - **Deoli** 200 Couples
    - **Aligarh/Uniara** 200 Couples
    - **1200 Couples**
      - **600 Rural Couples** 600 Males, 600 Females
      - **600 Urban Couples** 600 Males, 600 Females
      - **2400 Respondents**
3.4 Variables used in the study and their definition

- **Demographic characteristic divided into two categories:**
  - **Personal characteristics:** included age, gender, education, year of marriage, age at the time of marriage, number of children and occupation.
  - **Family characteristics:** included place of residence (Rural /urban), religion, caste, type of family and household, monthly family income.

### Table 3.1.1: Definition and categorization of different demographic characteristic

<table>
<thead>
<tr>
<th>Personal Characteristics</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Exact age of respondent (in completed years at the time of data collection) was asked in the questionnaire and then was classified as 17-21, 22-26, 27 - 31.</td>
</tr>
<tr>
<td>Education</td>
<td>Level of education has been divided into three categories up to Primary level, Secondary &amp; Senior Secondary and Graduation and above.</td>
</tr>
<tr>
<td>Age at marriage</td>
<td>Respondent’s age at marriage was asked in the questionnaire and divided in to three groups; Below 18, 19-22 and up to 23 &amp; above.</td>
</tr>
<tr>
<td>Occupation</td>
<td>Occupation of the respondents was asked in the questionnaire and presented as Private Job, Govt. Job, Own Business, Farming and Home Makers</td>
</tr>
<tr>
<td>Duration of Marriage</td>
<td>Duration of marriage was asked in the questionnaire and divided as 3 years, 4-6 years, 7-10 years.</td>
</tr>
</tbody>
</table>

### Family Characteristics

<table>
<thead>
<tr>
<th>Place of residence</th>
<th>Type of place of residence of the respondent was asked during identification of respondent as Urban/Rural.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion</td>
<td>The religion of the respondent in questionnaire was categorized as Hindu, Muslim, Sikh and Jain</td>
</tr>
<tr>
<td>Caste</td>
<td>Caste of the respondents was asked in the questionnaire and defined as General, OBC, SC and ST</td>
</tr>
<tr>
<td>Personal Characteristics</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------------------</td>
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</tr>
<tr>
<td>Type of Family</td>
<td>Type of Family of the respondents was asked in the questionnaire and categorized as Nuclear and Joint</td>
</tr>
<tr>
<td>Number of Children</td>
<td>Respondents were divided according to the number of children in the family as childless, single child, two children and three or more children.</td>
</tr>
<tr>
<td>Monthly Income of Family</td>
<td>Monthly income of family of the respondents was asked in the questionnaire and categorized into four groups; 5000-10000, 10000-15000,15000-200000 and 200000 &amp; above</td>
</tr>
</tbody>
</table>

➢ **Adoption and Non-Adoption of Family Planning and Contraception:**

Adoption is a mental process and all the innovations are not adopted by each and every individual in the same manner. Adoption of an innovation depends on factor wise knowledge of different aspects of innovation, adopters’ inquisitiveness and willingness. It is generally assumed that if individuals have more knowledge about a particular subject matter/ technique then they are more likely to adopt the innovation. On this ground, it was imperative to examine the extent of practice of adoption of the contraceptives by the respondents for the present study in terms of Knowledge Attitude and Practice (KAP) of family planning.

3.5 **Tools and techniques for data collection:**

The purpose of this study was to assess the knowledge, attitude, adoption and non-adoption and factors of influence of family planning and contraception among married couples. Semi structured questionnaire was prepared by the investigator for assessing general awareness of couples about family planning, adoption and non-adoption of contraception and underlying reasons. Questionnaire deals with three aspects-
General background and demographical variables included are:

Personal characteristics: included couple characteristic as age, gender, education, duration of marriage, age at the time of marriage and age of first conception, working status and occupation, number and sex of live children,

Family characteristics: included place of residence (Rural/urban), religion, caste, type of family and household, income, number of children, exposure to media.

Assessment of knowledge and attitude towards family planning and contraception: focused on the concept of family planning and contraception, most likely time for conception to occur, views about family planning, importance of family planning information, spacing of children, number of children, sex of children, hazards of unplanned family, advantages of family planning and barriers, sources of getting family planning information, importance of contraception, commonly known contraceptives, uses, side effects, emergency contraceptive, and ways to improve the information system.

Adoption and non-adoption of family planning and contraception: included items related to practice of family planning and contraception, responsibility of contraception, decisive authority, the reasons for practicing/not practicing/or discontinuation of contraception and not intending to use contraception in the future. Questions were of mixed type; yes/no, multiple options as well as open ended.

The questionnaire was prepared in Hindi and pilot tested and modified with the suggestions given during discussion with expert in Human Development, Psychology and health workers in the field. Schedule was finalized after field testing before conducting the actual survey.

Total six Focused Group Discussions were also held with some selected adopters and non adopters of family planning.
3.6 Procedure of Data Collection:

Data were collected individually in person on prior decided time and place. Any doubts relating to the items in the schedule were clarified. The researcher contacted selected respondents individually or on telephone to fix appointment for data collection. Questionnaire was given to respondent at appointed time and place. All the quarries were answered and completed questionnaire was collected. In case of illiterate respondents the questions were readout by the researcher and responses were noted on their behalf.

The informal discussions were held with respondents to bring out insights and understandings of issues examined in ways, which could not be captured in the quantitative data as well as to give comprehensive interpretation to the results derived from the quantitative analysis. The interactions bring out differing perspectives; people get caught in the spirit of group discussion and may reveal more than they would in the more formal interview setting. In the course of discussion, new avenues for exploration are opened and multiple meanings are revealed.

3.7 Analysis of Data:

Frequency and Percentage: information about characteristics, knowledge level, constraints related to contraceptives, IEC (Information Education and Communication) needs of respondents was interpreted on the basis of the frequency and percentage.

\[\% = \frac{n \times 100}{N}\]

n = Number of Respondents

N = Total number of Respondents

Chi-Square Test- It was used to study whether two variables were associated with or independent of each other. It was applied to check the association of knowledge and attitude with age, education, year of marriage of the respondents.

\[x^2 = \sum \left(\frac{(fo - fe)^2}{fe}\right)\]
Where,

\[ f_o = \text{observed frequencies} \]
\[ f_e = \text{expected frequencies} \]

Further, \[ f_e = \frac{RT \times CT}{N} \]

\[ RT = \text{the row total for the row containing the cell} \]
\[ CT = \text{the column total for the column containing the cell} \]
\[ N = \text{the total number of observation} \]
\[ df = (C-1) \times (R-1) \text{ and Level of significance for critical value of Chi Square} \]
\[ \text{was at .05 level.} \]

The research findings have also been illustrated with the help of bar diagrams and pie charts wherever necessary.