CHAPTER II

METHOD OF STUDY
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The present study was conducted on the major determinants of fertility pattern among the different caste groups of Hindus in two main urban areas of Orissa: Bhubaneswar and Cuttack. The period of study extended from 1977 July to 1981 July. The major objectives of this study were to discuss the biological, social and cultural variables and other intermediate variables and their relation with the fertility behaviour of the population.

The collection of data was started first at Bhubaneswar in December, 1977 and after finishing the work there, the data collection at Cuttack was done. Collection of data from both the places were almost completed by February, 1980.

The respondents were from different caste groups of Hindus. The study was done only among the Hindus irrespective of caste, education or income etc. The fertility pattern of 1500 couples from each urban centre was studied not by selecting the couples at random from the municipal records but by selecting couples from different locality of the cities. This process had to be adopted as the sample was restricted only to the
Oriya speaking Hindus of the two cities. Moreover those couples who have migrated to the urban centres only recently have been excluded. In other words, the sample drawn is a purposive sample.

The study was made keeping in view all the hypothesis which were available in literature on "Fertility behaviour". The hypothesis were also examined in specific chapters.

Many investigators have already worked on fertility in different places in India, taking into account different fertility variables. The different variables influence the fertility pattern of different groups of people in different ways. The investigators working in different places have got different results. Extensive studies were made on fertility pattern of different groups of people in India by E.D. Driver (Nagpur District), Moni Nag (West Bengal) W.M. Dandekar and Kumudini Dandekar (Poona study) Musain (Lucknow city) A.J. Coale and E.N. Hoover (Mysore study) S.N. Agarwala (Mysore report) N.V. Sovani (Survey of Kolhapur city), Kingsley Davis (analysed the 1931 census) and many other investigators. Those scholars worked with a number of variables and arrived at different conclusions. Some investigators found similar influence of a particular variable on fertility.
behaviour, whereas the others found the opposite result.
The main assumptions of different workers were that —
"Fertility is influenced (positively, negatively, curvilinear
fashion or not influenced) by the variables like religion,
urbanization, age at menarche, age at marriage, duration of
conjugal life, voluntary abstinence, taboos for cohabitation,
family structure, caste structure, occupational status of
husband, employment of wife, income of the family, educational
standard of the spouses, child mortality rate and extent of
adoption of family planning methods.

According to Driver and Kingsley Davis the fertility is high in case of Hindus, but highest in Muslims.
Urbanization also has got negative influence on fertility
(Davis 1951, Driver 1963).

Female age at marriage is important factor influencing fertility performance. It has been found by
Driver (1963) V.M. Dandekar & K. Dandekar (1958)
A.D. Gupta, C. Chandrasokharan and investigation carried out
by Registrar General, Census of India (1961) that the
age at marriage has got negative co-relation with fertility
rate. Male age at marriage is negatively correlated with
fertility, by Anand (1967) and Ghuryo (1934). But according
to Chand (1939), Henry (1960) husbands age at marriage is
of no importance for fertility performance of the couple.
The family type is also another variable associated with fertility rate. Lower fertility among city women living in joint families has been reported by Moni Nag, Strans and Winkleman (1969), Husain (1970) and Dutta (1961). But according to Driver joint families have high fertility rate.

The caste is considered to be an important factor in India's birth rate. The investigators like Driver (1953), Saxena (1965), Dandekar (1953), Davis (1944), Rakshit (1962), Ralo (1963), Samuel (1963), Singh (1958), Sinha (1957), Srinivasan (1967) reported that higher the caste lower is the fertility. But others like Coale and Hoover; Das Gupta, Ghosh reported that caste hierarchy is not related to fertility. Two reports (Bhate, 1961 and Husain 1969) show that relationship between caste and fertility is curvilinear bell shaped.

Fertility has been also correlated with economic status. Driver's report indicates absence of any direct or indirect association between fertility and income. According to Davis and Dandekar also there is no such correlation. But National Sample Survey report shows regular decrease in fertility rates among classes with increasing income. Poona study by Dandekar shows that fertility declines in the higher income group in the cities but remains constant.
in non-city areas among people of different income groups.

According to Kingsley Davis and Driver, higher occupational groups have lower fertility rate than the agricultural labourers and artisans. In the Nasik, Kolaba Districts (N. V. Sovani and Dandekar) urban rural women do not differ in their fertility performance according to the occupational or income status of the husbands.

Dandekar reports that (Poona survey) women employed outside have lower fertility rate. But Nasik and Kolaba Districts study show that fertility is independent of women employment status. Driver in 1963 showed positive correlation between women's employment and fertility.

Education is envisaged to be the most important variable in fertility. The National Sample Survey, Driver's study, study of Lucknow city by Husain, Poona study by Dandekar, Mysore study by A. J. Coales and E. M. Hoover reveals low fertility rate among higher educated groups.

Child mortality is another important variable in fertility. S. Chandrashokhawan, Driver, Freymann and Hoover have shown positive correlation between infant mortality
and fertility. But Pakrasi (1966) has found negative correlation between infant mortality and fertility.

Religious affiliation or preference is a man's most distinctive badge all over the world. Religious affiliation may have some bearing on fertility rates. Differentials in fertility according to religions, ethnic and other cultural groups have been reported in many studies (Freedman 1959, Kiser 1962, Westoff 1962, Lenski 1963, Goldberg 1967). The Catholics have higher fertility than Protestants and Jews, not as a result of low educational status or recent urbanization but as one of the characteristics of the religion itself (Freedman 1961). In India religious and other cultural diversities have contributed to definite fertility differences. According to 1971 census in India the growth rate for various religious groups are 24% for Hindus, 31% for Muslims, 33% for Christians and 32% for Sikhs. The traditional Hindu blessing to an Indian bride is "be the mother of eight sons." Within Hindu society also depending upon the pattern of their internal variations in culture, preference for sons or daughters varies. The preference for male or female children developed historically to meet the requirements of their cultural functions. Hindu customs like universal marriage, early age at marriage, strong desire for sons to continue family line and to perform rituals for salvation of departed souls have a strong influence on fertility rate.
The traditional Hindu way of life, however, facilitates reduction in the number of children by reduction in the duration of effective period of married life through culturally prescribed sexual abstinence during early and later parts of married life and also on different inauspicious occasions during the reproductive period. The slow growth of population in the past might have been partly due to these inhibiting factors. To-day most of the Hindus do not follow the true disciplined stages of the Hindu way of life.

Various studies are conducted in different parts of India, to study the variations in the fertility rates in two religious groups (the Hindus and the Muslims) of the areas. In all the studies, it has been found that the Muslims have higher fertility rate, though the age at marriage of the women is higher among them. This may be mainly due to the absence of widow marriage among the Hindus and also due to the religious abstinence in different occasions.

This study has been restricted only among the Hindus. Though in general, Hindus have higher fertility rate (than the Muslims), but now-a-days some changes have occurred among the Hindus due to high education and change in outlook. Some percentage of Hindu couples (percentage can be verified in Family Planning chapter) are strongly in support of
Family Planning and also doing abortions. Among the Hindus the fertility rate also varies in different castes. So the present work aims to study difference in fertility rate among the Hindu women.

The population of towns and cities in most of the world show lower average birth rates than the rural populations, and so also in India. Census of India show that in general, urban residents have lower birth rates than the rural people. The studies of the census returns and survey data indicate that the urban-rural differential was not significant until 1961; which is a significant factor in India's population growth, partly because of small population of urban people in the nation and partly because of narrowness of difference in fertility rates (Davis 1951, Mothan 1962, Driver 1963, Paulus 1966). Urbanization of a population seems to affect the patterns of birth, death and marriage etc.

Urbanization and industrialization affect fertility through their impacts on general aspirations, attitudes towards children, burdens of dependency and contraceptive technology. The present study has been done among the urban women to study the difference in fertility performances, supposed to be influenced by different fertility variables.

While studying the influence of different variables on fertility performance of the women, the variables religion
and urbanization are excluded as the study is restricted among the "Hindu urban women".

The hypothesis for the present study followed from the earlier observations. The influence of following variables on fertility, are studied in this study:

(1) Age of the spouses.
(2) Age at menarche of the mother.
(3) Age at marriage (Husband and Wife).
(4) Duration of conjugal life.
(5) Number of living children.
(6) Duration of lactation.
(7) Taboos for co-habitation.
(8) Family Type.
(9) Caste structure.
(10) Ideal family size.
(11) Desire for sons.
(12) Occupation of the Husband.
(13) Employment status of wife.
(14) Income of the family.
(15) Education of the Husband.
(16) Education of the wife.
(17) Child Mortality rate.
(18) Adoption of Family Planning.
The information was collected by questionnaire method. An exclusive schedule was prepared for this purpose, putting the questions to verify the influence of all the variables on fertility. The schedule had different parts dealing with different variables. The first part dealt with general socioeconomic and demographic variables. The second part dealt with the history of fertility pattern of the parental generation of both the spouses. The third part dealt with the variables controlling the sexual activities of the couples. The fourth part dealt with variables showing the impact of family planning programme, attitude towards the family planning procedures and family size norm. The fifth or the last part dealt with the detail history of the fertility performance of the couples. The sample consists of ever married women above the age of 15 years.

While collecting information for the fertility part of the schedule the fertility history from the time of puberty to the date of survey was reconstructed. The fertility events like conception, child birth, still birth etc. were noted sequentially. Births and deaths are registered in foreign countries but in India data of this kind are not available. Only the births & deaths which occur in the hospitals are recorded. So the demographic information was collected by means of inquiries through some questions with the aid of the prepared schedule. The questions were asked which related
not only to the current status or the happenings of the moments but also to the events of the past. The data very mainly according to nature of the respondent. The information regarding the recent happenings may be correct but it may not be always regarding the past events. Not only the accuracy of knowledge is involved here but also it is the natural human weakness to hide the unpleasant personal affairs. So they misstate the age and income etc. So the type of question asked and the way in which it is put affect the nature of the response. Too protracted questionnaire may provoke hostility or boredom and the recorded result then suffers accordingly. Response also varies according to education, social class and area (if there is political or religious bias in some places). With the change of time now the people are more willing than they used to be, to disclose information on personal matters associated with fertility.

During this research work the information regarding fertility performance were collected from the informants by personal interview moving from door to door and also in the Family Planning Centres. The informants were mainly the women though in most of cases where husbands were available the help of the husbands were also taken. For example, while asking questions regarding fertility behaviour of the parental generation of the couples the wife could not give correct answer
regarding the husband's brothers and sisters (who were dead before her marriage). In some cases the wives were also not aware of their husbands service and exact income. In those cases the help of the husbands were most essential. The informants in certain cases did not give the correct answer to the questions so the answers were checked by asking the second questions which were also included in the schedule. Some indirect questions were also put to them to check the answers which were not in the schedule. Checks were made on response to questions pertaining to age of the couples and children, age at marriage, husband-wife difference in present age, number of children ever born and the monthly income. All the women did not cooperate as they were not willing to disclose the facts about their private marital life to a stranger especially regarding the birth control measures. So before collecting the information a good rapport was established. The informants were informed the purpose of study, and they were part of a large group who were being contacted and lastly the assurance was given to them, that the information given by them would be treated very confidentially and there will be no name of the informants in the analysis and after analysis the schedules will not be handed over to anybody. Though the aim of the study was clearly explained to them, some women refused to answer the questions (though they are very few) but others were very co-operative. Due to lack of time information
more than 1,500 informants at Bhubaneswar and 1,600 informants from Cuttack. While interviewing the informants, the privacy was maintained as much as possible. The information about taboos regarding cohabitation were collected from the informants and also from the elderly women in the family where it was possible, to know the traditional attitudes towards fertility performance.

On the whole as the interviewees were mostly the women and the investigator was of the same sex, with very little difficulties the informations were collected regarding the facts about the private marital life of the informants.

After collecting the information, the analysis of the findings was done. The biological measurement of offspring which is known as 'fecundity' can be measured only in those groups of animals, where mating is purely a biological factor and it is not restricted by any chance events. Though in the beginning of first part of this century, several scientists wanted to study fecundity among the human group, the attempts proved to be failure, as it is found that mating in case of human being does not follow the rule of statistical principle. Kingsley Davis, who was the first man to study fertility, used a method for measuring fertility performance which was rather crude and there were several errors. The most generalised measurement of fertility can be obtained by:-
Crude Birth Rate = \( \frac{\text{No. of births in a given year}}{\text{Mid year population}} \times 100 \)

The defects of this measurement, it assumes all individuals to be taking active part in reproduction. Both male and female can not take part in reproduction unless they are biologically mature. Moreover the birth of new individual depends on the number of women in a population; and the period of gestation also limits the probable number of offspring for a single woman. Therefore in most cases fertility is studied with respect to women of the population. The next step of fertility measurement was introduced by Davis:

Child woman ratio = \( \frac{\text{No. of children of 0-4 years}}{\text{No. of women in fecund period (16 to 49 yrs.)}} \)

Here also it has been assumed that all women in fecund age group participate in reproduction. But we know that in different societies there are different regulations controlling the fertility behaviour. The unmarried girls in all societies are normally prevented from reproduction. So ultimately fertility is measured as:

Fertility Rate = \( \frac{\text{No. of live birth}}{\text{All over married women}} \)

In this measurement also there are certain amounts of errors. It excludes all pregnancy wastage in prenatal condition. To have a complete measurement of fertility of a population birth history and pregnancy wastage should be studied among all women who had passed their reproductive period and had also spent all the fecund period with their spouses.
In this study fertility has been studied as the birth performance which is measured on the basis of number of live born per evermarried woman at the time of interview irrespective of age as the study on determinants of fertility is based only on livebirth. The women having no livebirths were deleted. Those women may be 'fecund' but as "fecundity" (the amount of capacity to produce offspring) is different from "fertility" and as there is no possibility of checking the cause of infertility, they were excluded from the analysis.

Along with the fertility performances, different types of abortions, both natural and induced were noted. The number of still births were also noted along with the live births in order. The child mortality rate was studied.

The last part of the schedule deals with the informations on the adoption of the Family Planning Procedures.

For analysis of the data first the sample (i.e. couple or informants) was classified by wife's present age. They were grouped in four groups - (i) Age group below 25 years (ii) Age group 25 to 34 years (iii) Age group 35 to 44 years and (iv) Age group 45 years and above. After classification of the sample all the informations regarding fertility, pregnancy wastage and adoption of family planning methods were presented in tabular form.
Finally an attempt has been made to correlate the pattern of fertility variation with the age of the husband and wife, age at menarche of the wife, age at marriage of husband and wife, socio-economic status of the family, educational status of the husband and wife, employment status of husband and wife, duration of conjugal life, type of family, caste structure, taboos observed in cohabitation etc; which are supposed to be main variables influencing fertility performance of different populations. The child mortality is also analysed according to almost those variables mentioned above. The family planning programmes adopted are analysed according to some of the variables influencing fertility pattern.