CHAPTER - IV

METHODOLOGY
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This chapter, describes the methods and procedures followed in undertaking the present study.

Sources of data:-

The data were collected from primary as well as secondary sources. Primary data were collected from the respondents of the selected villages, while the secondary data were collected from reports and records, available with different organisations and offices, such as, Office of the Block Development Officer, Sukinda, Medical Officer, Kalrangiatta, Primary Health Centre, Office of the Harijan and Advasis Research and Training Institute, Bhubaneswar, Health Directorate, Bhubaneswar, and Census Office, Bhubaneswar.

Research Design:-

The research design is an outline of structure and method of investigation through which answers to research questions along with controlled variance are obtained. According to Selltiz & Jahoda (1962), a research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. An outline of plan is overall scheme of the research. It includes an outline what an investigator wants to do from defining the problem to final interpretation of the results. In this study exploratory or formulative design
has been followed. According to Jahoda, "Exploratory research is necessary to obtain the experience which will be helpful in formulating relevant hypothesis for more difficult investigation."

Exploratory design is helpful because it provides information about the condition of the problem. When the investigator does not have the resources and capability to test the hypothesis, he is able to find through exploratory or formulative design.

In the formulative or exploratory research design, the premium is on discovery of ideas and insights, that helps the researcher in formulating a problem for research or in developing hypothesis to be tested subsequently. An exploratory study may however have other functions i.e. increasing the investigators familiarity with the phenomena he wishes to study in a subsequent investigation. Further, it also serves as a basis for clarifying concepts, establishing practices for further research, gathering information about practical possibilities for carrying out research in real life setting etc. This type of study is essential for the areas where much is not known.

Meaning of exploratory study can be understood with the following examples. A doctor who is called upon to attend on a patient, whose malady is totally unfamiliar with, will ask him various questions concerning his complaints, will examine the various parts of the patients body using different instruments at his disposal, and study the patients pathological
reports or records. On the basis of this exploration, the doctor may find himself in a position to pose a question like "could it be typhoid"? One of this hypothesis relating to the above question will be "it is typhoid". The doctor's treatment with antibiotics will constitute the test of the hypothesis. If the patient responds favourably to the treatment, there is room for believing that typhoid hypothesis is tenable. If the post treatment observations record unfavourable response, the typhoid hypothesis is rejected.

The above example illustrates the nature of an exploratory study. In the initial stage, when the doctor asks patient all manner of questions, examines him using various instruments and scrutinizing various reports, the doctor is simply exploring i.e. undertaking an exploratory study. Thus the exploratory study may be considered an earlier step consisting of problem solving or hypothesis formulation, to be followed by other steps consisting of problem solving or hypothesis testing on a continuous research process.

Period of study:-

This study was conducted for a period of 2 years 2 months starting from the month of May 1990 and ending in July 1992.

Location:-

The investigation was carried out in eight villages (Ragada, Kendubani, Pimpudia, Giringamali, Baragaji, Bambilo,
FIG. 2: MAP OF ORISSA SHOWING SUKINDA BLOCK.
Kakudia, Kalrangi) of Sukinda Block in the district of Cuttack, Orissa. While selecting the villages, attention was given to select backward villages having tribal population.

Selection of the Block:-

Sukinda Block of Cuttack District was selected for the purpose of present study for the following reasons.

(i) It is nearer to Bhubaneswar, the state capital and has good communication facility.

(ii) This block has 129 revenue villages, out of which 71 are tribal villages.

(iii) The villages in this block are mostly underdeveloped in comparison to villages of other blocks.

(iv) The people in general and tribals in particular are poor.

Selection of villages:-

A list of tribal villages was prepared with the help of the block staff, out of which following eight villages were selected at random.
Selection of the Respondents:

A list of families having children upto 6 years of age was prepared from each of the sample villages. From that list, 200 families were selected by using random sampling technic. Thus out of 872 families 200 families were finally selected for the purpose of present study. From this 200 families, 478 children were selected.

Development of Schedule:

A schedule was prepared for collection of data from the respondents keeping in view the objectives of the study. Accordingly, the schedule was divided into five sections as given below.

Section A:-

To study the socio-economic background of the respondents.
Section B:-

To study the nature of diet taken by the children of the Schedule Tribe Communities.

Section C:-

To study the impact of nutrition on the growth and development of children and mothers.

Section D:-

Sources and channels of getting information about nutrition.

Section E:-

Knowledge level of mothers about child care and nutrition.

Section F:-

Suggestions for solving problems of malnutrition among tribals.

Collection of Data:-

Date were collected through personal interview with the help of local Village Level Worker(V.L.W), who was known to the respondents. These tribals in general are completely unaware of such types of investigation and hence were not willing to co-operate in the beginning. They had to be convinced through discussions and personal contact. The author had several meetings with the women of the villages to explain the purpose of study after which they were willing to give information as required.
Interview was conducted for a total period of 6 months starting from 15th May, 1990 and ending in November, 1990.

Interview used to be conducted from 10.30 A.M. to 3.30 P.M. and within a day 4 to 5 families were interviewed. On an average it took 45 minutes to complete interview with one respondent.

The author used to conduct interview in the village common place when women and children usually gather. Sometimes interviews were also taken in the houses of some respondents.

Observation on weight and height:

One of the objectives of the study was to record height, weight and age of the children and their mothers. It was actually a time consuming job for the author to collect the respondents and take the observations in all the sample villages. A portable weighing machine was used for this purpose. The author had to take the help of Village Level Worker (V.L.W.) for recording the observations.

Another objectives of the study was to find out the knowledge level of mothers about child care and nutrition. For this purpose 50 questions were prepared covering different aspects of nutrition and child care. The author had to ask these questions to the mothers through discussion and recorded their observations. This was done very carefully because
most of them either illiterate or had very little formal education.

**Measurements of variables:**

The following non-parametric or parametric statistical methods were used in this study based upon the nature of data and the type of information required.

**Percentage:**

Simple comparisons were made on the basis of percentage. Percentage was calculated up to two digits after the decimal point. This has been used at many places in the analysis and proved helpful in organizing the data with clarity and precision.

**Mean:**

The mean is the arithmetic average and is the result obtained when the sum of the values of the individuals in the data is divided by the number of individuals in the data. The mean is usually denoted by the symbol $\mu$ and given by

$$\mu = \frac{\sum x}{n}$$

This method has been followed in this study to place respondents under different categories of malnutrition.

**Nutritional Assessment:**

The assessment of nutritional status is accomplished
by carrying out, i.e., clinical examination, anthropometric measurements and laboratory examinations, study of vital statistics, assessment of ecological factors, dietary examinations etc. But anthropometric measurements and dietary examinations has been used to assess the growth and development.

**Nutritional Assessment by Anthropometric Examination**

The term anthropometry was first coined by Lambert Adolphe Faques Quetlet in 1836, and subsequently has been used by several workers to assess growth and development. Guillot in 1852, probably was the first scientist, who used several weight and height records as the basis of the health status and adequacy of the breast milk feeding. Bowditch in 1875 recommended that the standard weight and heights provide the best and easiest index for rapid screening of the population. In 1933 Bigwood suggested standard procedures like height and weight records to differentiate the healthy from the unhealthy group. World Health Organisation also recommended the use of anthropometric criteria in conjunction with clinical methods as the basis of assessing the prevalence of malnutrition and its geographic distribution.

The anthropometric measurements were used as a basis for assessment of nutritional status in 3029 Delhi rural preschool children by Ghai et al. (1970). A tentative diagnosis of protein-calorie-malnutrition was made by comparison methods. Several workers (Srivastav et al. 1970; Athavale, 1971;

By Park & Park (1986), anthropometry predominates over other methods of nutritional assessment. Height, weight, arm circumference, skinfold thickness etc. are necessary for anthropometric measurements. Height for age and weight for age are often more useful tools for defining an individual's nutritional status than in weight for height, which does not take into consideration.

**Degrees of malnutrition:**

The degrees of malnutrition has been described by many workers (Park & Park, 1986; Jelliffe, 1959 & Indian Academy of Paediatrics, 1975). But park's classification has been used in this survey. The degrees of malnutrition classified by park has given below.

a) **First degree malnutrition:**

Weight between 80 and 71% of the Harvard standard.

b) **Second degree malnutrition:**

Weight between 70 and 61% of the Harvard standard.
c) Third degree malnutrition:

Weight below 60% of the Havard standard.

Above 80% of the Havard standard should be considered as normal. General anthropometric standards (by Jelliffe, et al, 1966) has been used for calculating the degree of malnutrition.
### Conceptual Framework of the Study

#### Objectives of the Study

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#### Selection of Respondents (200)

#### Interview & Collection of Data

#### Developing Interview Schedule

#### Compilation & Analysis & Interpretation

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**Fig-5.** Identification of Problem