CHAPTER-III
METHODS AND INTERPRETATION

3.1. Introduction:

Methodology is one of the important parts of any type of research. Because the scientific analysis and generalization depends on the correct application of method. This part usually involves two parts: the subjects and the procedures. Subjects refer to the details of population from which the researcher plans to select the sample and procedures refer to the plan of the research. Procedures describes in detail what will be done, how it will be done, what data-gathering devices will be used and the method of analyzing data.

On the other hand, Interpretation refers to the task of drawing inferences from the collected facts after an analytical and or experimental study. Interpretation is a very important step in the total procedure of research. Interpretation is the device through which the factors that seem to explain what has been observed by researcher in the course of study can be better understood and it also provides a theoretical conception which can serve as a guide for further researches. Interpretation is essential for the simple reason that the usefulness and utility of research findings lie in proper interpretation.

This chapter planned to have a brief description of the strategies used for collection of data for the purpose to achieve research objectives.

3.2. Statement of the problem:

The first step in the process of research is the identification of a suitable problem for investigation. The researcher must select a specific problem from the broad field within which he/she will conduct the study and should have deep interest in the field. Each researcher selects a problem according to his/her own unique needs and purposes. Therefore, there are some important sources which are helpful to a researcher for selecting a problem, i.e. professional
experience, inference from theory, professional literature, technological and social change, consultations etc.

For the present investigation, the title of the research study is “A critical study of Mentally Retarded Children with special reference to four institutes of Guwahati city – Assam”

3.3. Definition of the Problem:

After the problem has been selected the next task is to define it in a form amenable to research. Defining a research problem refers to pinpointing the problem to reach the core of the problem. The process of defining a problem involves a thread base analysis of the problem. According to Whitney, “To define a problem means to put a fence round it, to separate it by careful distinctions from like questions found in related situations of need.”

According to Monroe and Engelhart, “To define a problem means to specify it in detail and with precision. Each question and subordinate question to be answered is to be specified. The limits of the investigation must be determined. Frequently, it is necessary to review previous studies in order to determine just what is to be done. Sometimes it is necessary to formulate the point of view or educational theory on which the investigation is to be based. If certain assumptions are made, they must be explicitly noted.”

Defining a research problem properly is a prerequisite for any study and is a step of the highest importance. It is only on careful detailing the research problem that we can work out the research design and can smoothly carry on all the consequential steps involved while doing research.

3.4. Objectives of the study:

After selecting and defining the problems, objectives must be determined for the research study. At the present study, the following objectives were determined:
• To study about the different causes of mental retardation of children.
• To find out the various problems of mentally retarded children at different level.
• To study about the preventive approach of mental retardation of children.
• To study about education and training of mentally retarded children at different level of retardation.
• To study about the role of parents, teachers, society and institutions in general which can play a vital role in order to improve the environment of the mentally retarded children.

3.5. **Hypothesis of the Problem:**

The research hypothesis is usually considered as the principal instrument in research. A research hypothesis is a tentative answer to a question or tentative solution of the problem concerned. Hypothesis has a very important place in research although it occupies a very small space in the body of a thesis. The hypotheses are to be formulated before the collection of data. This will enable the researcher to carry on an unbiased investigation and it provides direction to research.

The researcher has formulated the following hypotheses for the present study:

1. There are significant causes of mental retardation arising from biological and psychosocial factors.
2. There are various existing problems of mentally retarded children at different level.
3. There are some significant remedies of mental retardation of children.
4. There are some significant provisions of education and training for mentally retarded children at different level.
5. The role of parents, teachers, society and institutions in order to improve the overall environment of mentally retarded Children.
3.6. Limitation of the Problem:

The limitation of the study is a necessary point of research. Because it saves wastage of time, money, labor of researcher. Here, the study is limited only to:

- Four Non-Govt. institutions of mentally retarded children of Guwahati city of Assam.
- Sample selection was taken 120 mentally retarded children, 60 parents of mentally retarded children and 20 teacher.
- The study was limited to four variables, causes of Mental retardation, problems, management and education.

3.7. Sample of the Problem:

A sample is a small representation of a larger whole. The representative proportion of the population is called sample. It consists of subsets of the units that comprise the population. For the study, four institutions were selected randomly. The selection was made on the basis of information gathering during the familiarization that is, these institutions were said to have contact with a large number of mentally retarded children and parents of the retarded children. In this study the samples were:

- 120 mentally retarded children, ages ranging from 6-18 years, including mild, moderate, severe & profound retarded children of four non-government institutions of Guwahati city of Assam.
- 60 parents of mentally retarded children.
- 20 teachers including coordinator of above stated four institutions.

3.8. Sampling Method:

Sampling is a process of selecting the sample from the population. For this purpose the populations are divided in number of parts called sampling units. When a sample group is selected as representatives of whole masses is known as sampling method. The sampling method was used in Social Sciences research as early as in 1754 by A.L. Bowley. In this study, the
simple random sampling method was adopted for collection of data which is the most popular and basic method of sampling. Simple random sampling means that every member of the sample is selected from total population in such a manner that all members of the population have essentially the same probability of being selected.

For the present study, only four non-government institutions of mentally retarded children of namely, MON VIKASH KENDRA, ASHA DEEP, DESTINATION and SHED were selected that had all total more than 250 no of mentally retarded children. Out of total children, 120 MRC were selected randomly. Therefore, 60 parents of mentally retarded children were interviewed according to the structured interview schedule. 20 teachers including coordinator were also interviewed according to questionnaire and interview schedule. Altogether 200 samples were selected for the study.

3.9. Procedure of Data Collection:

The most crucial aspect of any investigation is the collection of appropriate information which provides necessary data for the study. Data describes group behaviour or group characteristics abstracted from a number of individual or group observation that are combined to make generalization possible. Based on the objectives of the study a structured interview schedules were prepared to obtained necessary information for the study.

The final study was conducted at four institutions namely, Monvikash Kendra, Ashadeep, Destination and Shed of Guwahati city of Assam from May of 2011 to January 2012. The verbal consent was taken from the teachers and parents of mentally retarded children to take part in the study.

The data collection was started from 2nd May 2011. The researcher along with schedules had gone to respondents, put to them the questions from the performa in the order the questions were listed and recorded the replies in the space meant for the same in the Performa. In certain situation, the investigator had given this schedule to respondents in recording their answers to
various questions in the said schedule. Self introduction was given and rapport was established with the parents of MRC and the teachers. However, the role of the investigator was explained.

The investigator also collected data through observational method where as the researcher had actively involved with the MRC of the selected institutions. Otherwise case study method was also used for gathering information.

Thus, investigator had collected relevant data from the desired field. The sample was selected according to the sampling criteria. Within the appropriate schedule, data collection was completed.

3.10. Method of the Study:

Research methods simply understood as all those methods/ techniques that are used for conduction of research. In other words, all those methods which are used by the researcher during the course of studying his/her research problem are termed as research methods.

For the purpose of the present study, Descriptive Survey approach method was selected as it seems to be appropriate to accomplish the objectives of the study.

3.11. Research Design:

Research Design refers to strategies that the researcher adopts to develop information that is accurate, objective, and meaningful. The selection of research design is the most important step as it provides the framework for the study. It helps the investigator in the selection of the subject for the research study. Therefore, research design facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximal information with minimal expenditure off effort, time and money.

Keeping in view the objectives of the study Descriptive Survey Research Method was selected for the study. The descriptive research is a study in which a body of data is collected, recorded and analyzed to answer a question, satisfy curiosity solve a problem or establish a cause
effect relationship. The design was developed to examine the variables in a situation that has already occurred. No attempt was made to control or manipulate the situation. The design was selected to the particular area methodically.

**Variables under Study**

Variables in the present study were

- The causes of mental retardation of children.
- Problems of mentally retarded children at different levels.
- Preventive approach of mental retardation of children.
- Education and training of mentally retarded children by the institutions.

**3.12. Tools of the Study:**

Any research involves the collection of some information or data, which is an important aspect of any type of research. There are many data gathering techniques or tools which may vary in their complexity, design, administration and interpretation. It is notable that each tool is appropriate for collection of certain type of evidence or information. The researcher has to select available tools which will provide desired data and seeks for testing hypotheses.

In this study, the researcher has collected the data mainly from the primary source of data. In the present study, interview schedule (self-made by the investigator), observation, and case study method were employed for gathering the data relevant to the study.

**Development of Structured Interview Schedule**

Interviews are used to gather information regarding individuals past experience and knowledge; feelings and demographic data. Structured interview schedule was prepared to identify background data of the parents; to identify the causes of mental retardation, and problems of MRC at different levels; to know about the educational training of mentally retarded children.
The items of the tools have been planned on the basis of theoretical framework developed for the purpose of the study. The steps were followed for the selection and preparations of the items were:

- An extensive review of research and non research literature.
- Informal discussion with peers and experience gained by the investigator.
- Consultation with guide to ensure the appropriateness of the items.
- Planning and preparing of structured interview schedule

**Description of Structured Interview Schedule**

- Structured interview schedule for the background data comprised for such items as age parity, education, occupation, religion, monthly family income. The monthly income scale has been taken from the Modified of Kuppuswamy’s socio-economic status scale for the year 2007 is used.
- Structured interview schedule to identify the available causes of MR were prenatal problems, natal and neo-natal problems and postnatal problems psycho-socio problems, Hereditary, accident, and other causes of mental retardation.

The structured interview schedule was administered to 60 parents of mentally retarded children who have faced by different problems that influence their retarded children. The schedule is attached in the appendix.

As interview schedule, two sets of Questionnaire i.e. one for parents and other for teachers were prepared with background information. The interview schedule- I, was constructed with 50 items for parents to find out the causes of mental retardation of children. Interview schedule II, meant for teachers including 30 items to know the various problems and education of mentally retarded children. These items were both open and close-ended forms. These interview schedules were prepared and developed by the investigator to translate the principal objectives of the way.
Observation

Observation is another technique which is used for the data collection. Both participant and non-participant observation method were also used for data collection in behavioural term in the study.

According to Jahoda, the observation method as scientific technique to the extent that it “(a) serves a formulated research purpose, (b) is planned systematically rather than occurring haphazardly, (c) is systematically recorded and related to more general proposition and (d) is subjected to checks and controls with respect to validity reliability precision.”

Here, the researcher actively participated with the activities of the respondent under the study. This observation helps in the recording of behaviour at the time of important occurrence. This method is the most commonly used method especially in studies relating to the behavioral science. Under the deviation methods, the information was sought by way of investigator’s own direct observation without asking from the respondents. The information obtained under this method relates to what is currently happening. This method is particularly suitable in studies which deal with subjects who are not capable of giving verbal reports of their feeling for one reason on the other.

Case Study

The case study was intended to provide some information on the historical background, and the current conditions of the mentally retarded children. In this study, two approaches were used. In the first approach, gathering information on each case through parents of MRC and in the second approach a frequent contact with the children and discussion with the teachers and other individuals who involved this subject matter.

In the present study, intensive case study method was used for the collection of data. This method of study is depth rather than breath. The case study places more emphasis on the full analysis of a limited number of events or a conditions and their inter relations. It is essentially an
intensive investigation. Through this method the investigator tried to know about the causes or factors related with mental disabilities of children. Besides, the investigator also tried to know about the various problems of the mentally retarded children. Therefore the investigator conducted a direct personal investigation to the parents and teachers to know about the problems or facts and happening related with their different periods i.e. prenatal, natal, neonatal and postnatal period, education and problems of mentally retarded children. Through this investigation, the investigator tried to know about the causes or factors related with mental disabilities of children.

3.13. Data Collection:

Data collection is essentially an important part of the research process. The task of data collection begins after a research problem has been defined and research design chalk out while deciding about the method of data collection to be used for the study. The researcher should keep in mind two types of data, i.e. primary data and secondary data.

The primary data are those which are collected afresh and for the first time, and thus happen to be original in character.

The secondary data, on the other hand are those which had already been collected by someone else and which has already been passed through the statistical process. Therefore, the researcher would have to decide which sort of data he/she would be using for his/her studies and accordingly he/she will have to select on or the other method of data collection.

The methods of collecting primary and secondary data differ since primary data are to be originally collected, while in case of secondary data the nature of data collection work is merely data of compilation.

The researcher has collected primary data with the help of interview schedule, observation, and case study method from the entire field according to the objectives of the study.
Therefore, researcher has also collected requisite information from different books, periodicals, official records, etc.

3.14. Data Analysis

Data analysis is the main step of any type of research study. Analysis of data means studying the tabulated material in order to determine inherent facts or meanings. It involves breaking down existing complex factors into simpler parts and putting the parts together in new arrangements for purpose of interpretation.

In the present study, the data analysis was planned to include descriptive statistics according to objectives of the study as well as open analysis. The following plan of data analysis was developed-

- Frequency and percentage distribution of sample characteristics in terms of background data as expressed by the parents of MRC.
- Frequency and percentage distribution of the identification of available causes or factors of mental retardation of children at different stages.
- Frequency and percentage distribution of identification of various problems of mentally retarded children at different levels of mental retardation based on IQ.

The final analysis has been made on the basis of the variables of the study such as causes of mental retardation of children, problems of mentally retarded children, preventive approaches of mental retardation of children and education of mentally retarded children.

In fact, collected data were critically examined in terms of suitability and statistical technique was used to find out result in the form of percentage.

3.15. Statistical Techniques:
Statistics is an important tool of the research worker. Statistical analysis is a body of mathematical techniques or processes for gathering, organizing, analyzing, and interpreting numerical data and is one of the basic phases of the research process. Statistical techniques help the researchers in carrying out the work successfully. Some advantages of the use of statistical techniques are: they permit the most exact kind of description and enable us to summarize our results in a meaningful and convenient form. Therefore, statistical operations enable us to draw general conclusions.

Various common statistical methods are used in research study for analyzing data. At the present study, collected data were analyzed in the form of descriptive statistical analysis. In this respect the investigator has collected information through the use of different tools, interview schedule, questionnaire, observation, case-study and discussion. After collecting the relevant data, the data were edited, classified and tabulated. The presentation of result in tabular form and percentage is also invariably done.

3.16. Setting of the Study:

Settings are the specific places, where data collection will take place. It is very important part to select an appropriate setting where the study will be feasible in terms of availability of the subjects, cooperation of the parents and transportation facilities.

The present study was conducted in four non-government institutions of Guwahati city of Assam, where majority of children were mentally retarded.

The rationales for selecting the institutions were:

- Availability of the data.
- Feasibility of conducting the study.
- Having enough children with mental retardation.
- Expected cooperation from teaching and non-teaching staff.
- Cooperation of all parents of mental retarded children.
3.16. Conclusion:

Method is the important task of any research study. Generally on the basis of objectives of the study, methods are usually selected for investigation. With the help of appropriate tools and techniques, the requisite data are collected by the researcher. Qualitative data are taken the form of loosely structured, narrative materials-dialogue between an interviewer and respondents. The purpose of data analysis is to organize, provide structure to and elicit meaning from research data. Here data collection and data analysis usually occur simultaneously, rather than after data are collected. The search for important themes and concepts begins from the moment data collection gets under way.