

CHAPTER-III

Research Methodology

RESEARCH METHODOLOGY

Introduction

This chapter contains the research methods used in the present study starting from the selection of study area to the analytical framework. Taken into account are the different research steps like, selection of study area, sample design, sample size, preparation for field work, data collection, data processing, the variable studied, definition of concepts used and data analysis and analytical frame work designing purpose for which design is being made is to be decided. The purpose for which design is being made is to be decided. The purpose for which research is to be used will also have to be decided at the designing stage. Designing thus provides a picture for the whole, before starting of the work. It is then obvious that many difficulties and inconvenience come to light at the stage before starting of the work and if properly cared these difficulties can be removed as well. At times it is felt that expenditure on designing is useless and should be avoided, but that is not so because designs help in many unless expenses. Design thus helps in planning and is a process of deliberate anticipation a proper research can thus help us in controlling research procedures and anticipate failures and faltering, if any.

Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. The Learner's Dictionary of Current English lays down the meaning of Research as "a careful investigation or inquiry especially through search for new facts in any branch of knowledge."(Oxford, 1952) Redman and Mory defined Research as systematized efforts to gain new knowledge. (1923)

Research is defined as human activity based on intellectual application in the investigation of matter. The primary purpose for applied research is discovering, interpreting, and the development of methods and system for the advancement of human knowledge on a wide variety of scientific matters of our world and the universe. Research can use the scientific methods, but need not do so.

In other terms research is an academic activity and as such the term should be used in a technical sense. According to Clifford Woody research comprises defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data; making deduction and reaching conclusions; and at least carefully testing the conclusions to determine whether they fit the formulating hypothesis. Slesinger and M. Stephenson in the Encyclopedia of Social Science define research as “the manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge, whether that knowledge aids in constructions of theory or in the practice of an art.” Research is thus, an original contribution to the existing stock of knowledge making for its advancement. It is pursuit of truth with the help of study, observation, comparison and experiment. In short, the research for knowledge through objectives and systematic methods of finding solution to a problem is research. The systematic approach concerning generalization and the formulation of the theory is also research.

When we observe certain objects or phenomena, often unaware of our biases, we do not question them and so we attribute our observations entirely to the objects or phenomena being observed. In this process, it is possible to arrive at right decision on the basis of wrong reasons or vice versa. This questions the process of observation. Was the observation error free? Every method of knowing has certain limitations. While observing are we aware of our limitations? Any study to create new knowledge or aims to increase existing fund of knowledge may it be through observation or by some other methods, is called research if it takes into account the biases, the errors and limitations. As such, research may be described as systematic and critical investigation of phenomena toward increasing the stream of knowledge.

Social Science Research

Social science research although social inquiry would be a more appropriate term as used throughout this book, refers to *any scientific study of human action and interaction focusing on elements of thought and behavior that are in some sense*

social. As such, social scientists aspire to science. They intend to study human action and interaction and thought and behavior in a systematic, rigorous, evidence-based, generalizing, replicable, and cumulative fashion. Such research is, or can be, of great importance to human affairs. Even though some social scientists would dispute this definition, it is, nonetheless, neither too precise nor too general and therefore sufficient to define the practice of social science research in a lucid, cogent way. That being said, social science research is, more specifically, a truth-seeking activity aimed at contributing to existing knowledge, generating new knowledge, or for application to some specific problem related to human action and interaction. Truth seeking is the search or investigation of or for a body of real things, events, or facts. In the social sciences truth seeking is normally the process of applying a scientific method to social inquiry. A scientific method is the set of principles and procedures used by social scientists for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge. In many instances, this process involves formulating or testing a specific theory or hypothesis, in the broadest sense, where theory is defined as “a set of interrelated constructs, definitions, and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting phenomena” (Kerlinger, 1986)

Often, social scientists contribute to existing knowledge and generate new knowledge by systematically investigating one or more of three types of questions: (1) descriptive questions; (2) relational questions; and (3) causal questions (Kline, 2008):

1. *Descriptive*: Descriptive questions are the most rudimentary types of questions that social scientists seek to answer. Such questions involve the simple account of a set of observations on a set of variables of interest. Few questions of interest to social scientists are exclusively descriptive.
2. *Relational*: Relational questions are among the most common types of questions of concern to social scientists. They involve the most basic

assumptions investigated by social scientists, such as whether a relationship between two or more phenomena exists at all. More often than not such questions are not only concerned with whether a relationship exists between two or more variables, but more specifically the direction and magnitude of covariation.

3. *Causal*: Causal questions are concerned with whether or how one or more independent variables affect one or more dependent variables. Causal questions can be relatively simple (i.e., causal description) or more sophisticated (i.e., causal explanation). In general, descriptive causal questions are those in which social scientists inquire as to whether consequences attributable to varying an independent variable can be established, whereas questions about causal explanation are those in which social scientists seek to identify the mechanisms through which and the conditions under which causal relationships hold.

Scientific Research

Science aims at description, explanation and understanding of various objects or phenomena in nature and research are special endeavors, which involves systematic and critical investigation. Thus, towards increasing the stream of knowledge now it is easier to define scientific research. We may define scientific research as a systematic and critical investigation about the natural phenomena to describe, explain and finally to understand the relations among them.

Scientific Method

It is obvious that it would be impossible to comprehend the nature and content of research without an appreciation of a method. The method used in scientific research is usually designated as scientific method. According to George Lundberg (1946), scientific method consists of three basic steps, systematic observation, classification and interpretation of data. Through these steps, scientific method brings about not only verifiability of the facts, but also it lays the confidence

in the validity of conclusions.

The definition requires some more explanations. First when Lundberg (1946) says that scientific method is systematic observation, he means in effect, the scientific investigation is not ordered, it aims only at discovering facts as they actually are and not as they are desired to be and as such the investigators can have critical confidence in their conclusions. Second, the scientific method is concerned with 'classes of objects' not 'individual objects'. Universality and predictability are other features of scientific method. The method makes it possible to predict about a phenomenon with sufficient accuracy.

Use of Scientific Method in Social Work

Social work primarily deals with human behavior, which is, by and large, complex and dynamic in nature. One cannot, therefore investigate under guided conditions as in natural and physical sciences. This creates many problems to the researcher such as the problems of subjectivity and individualistic generalizations etc.

The problem arising out of the nature and content of social work do not seriously diminish the importance of scientific method for social workers. Notwithstanding the inherent limitations scientific method can be used for the study of problems related with social work so far as it helps to arrive at valid generalizations.

Meaning of Social Work Research

In a very broad sense, social work research is the application of research methods to solve problems that social workers confront in the practice of social work. It provides information that can be taken into consideration by social workers prior to making decisions, that affect their clients, programmes or agencies such as use of alternative intervention techniques or change or modification of programme/client/objectives and so forth. Following are some of the situations which call for

application of social work research methods and techniques:

A Social Caseworker is interested in assessing the nature and extent of the problem of her client who has been facing marital maladjustment.

She/he may be interested in obtaining information about the actual or potential effectiveness of the client. She/he may also be keen to know to what extent the intervention would be effective.

A Group Worker wishes to assess the extent to which the technique of role play is more or less effective than group discussion in increasing knowledge of drug abuse among school going children.

A Community Organizer wants to know the views of the community before he takes a decision to change the programme/objectives.

Social Work Research: Definition

Social work research may be defined as systematic investigation into the problems in the field of social work. The study of concepts, principles, theories underlying social work methods and skills are the major areas of social work research. It involves the study of the relationship of social workers with their clients; individuals, groups or communities on various levels of interaction or therapy as well as their natural relationships and functioning within the organizational structure of social agencies.

While on the theoretical side, social work research re-examines the special body of knowledge; concepts and theories, where as in the area of social work practice it tries to evolve a systematic theory and valid concepts, to know the efficacy of different methods/interventions of social work as to search for alternate/innovative interventions and treatments.

Social work research, therefore, concerns itself with the problems faced by social workers. It encompasses those questions which are encountered in social work practices or in planning or administering social work services which can be solved through research and which are appropriate for investigation under social work auspices.

Social work research utilizes the same scientific methods and techniques, as does social research. No doubt, when some (research designs) procedures of social research are not suitable to social work research it would be necessary to develop the tools which would be appropriate to social work research.

Social Work Research: The Process

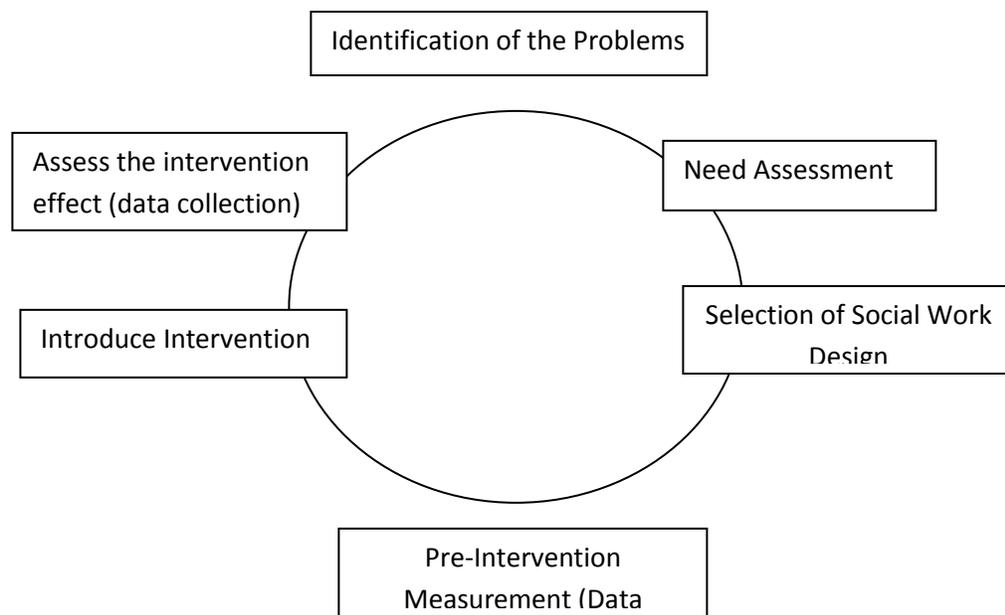
It must be borne in mind that the process of social work research is not completely identical to social research. In fact, there are many similarities between this process and the traditional research process. The process however, has some additional steps designed to suit the objectives of social work research. By following the process social work researchers are in a position to know precisely what intervention was applied and how much effect was produced. The process also links research and practice.

Social work research starts with problem identification and setting up of goals. This is followed by the process of assessment (or need assessment) of the client's problems. During these initial stages, the researcher strives to obtain a clear and specific understanding of the problem, using assessment tools such as interviewing (Monette, et. al., 1986).

After the problem is identified and needs are assessed, the next step is to set up goals to be achieved. The goals are required to be specific, precisely defined and measurable in some way. The third step in the process is to have a pre-intervention measurement, that is, measurement prior to intervention; the pre-intervention measurement is used as basis from which to compare the client's condition after the

intervention is introduced.

Next stage in the process is to introduce intervention. It is important here to note that only a single, coherent intervention be applied during any intervention phase. In the last stage, we assess the effects of intervention by comparing the two measurements, that is, pre-intervention measurement and measurements during intervention.



Social Work Research Process

Scope of Social Work Research

Social work profession has a scientific base, which consists of a special body of knowledge; tested knowledge, hypothetical knowledge and assumptive knowledge. Assumptive knowledge requires transformation into hypothetical knowledge, which in turn needs transformation into tested knowledge. Social research has significant role in transforming the hypothetical and assumptive knowledge to tested knowledge. (Khinduka, 1965)

Not all concepts or theories that are used by professional social workers have been tested and validated. Concerted efforts through social work research are very much required to conceptually articulate and validate the concepts and theories, which will in turn strengthen the scientific base of professional social work.

Identification of social work needs and resources, evaluation of programmes and services of social work agencies are some of the areas in which social work researches are undertaken. Social work research may be conducted to know the problems faced by professional social workers in social work agencies and communities in its concern with social work functions. Thus, social work research embraces the entire gamut of social work profession; concepts, theories, methods, programmes, services and the problems faced by social workers in their practice.

The areas of social work research may be broadly categorized as follows:

- Studies to establish identify and measure the need for service.
- To measure the services offered as they relate to needs.
- To test, gauge and evaluate results of social work intervention.
- To list the efficacy of specific techniques of offering services.
- Studies in methodology of social work.

Social work is a diverse profession, possible broad research areas could be:

- Community Development
- Community Health (Including Mental Health) Child Welfare
- Women Welfare
- Youth Welfare
- Aged Welfare
- Welfare of SC & ST Groups
- Poverty Alleviation
- Physical and Mental Disabilities

- Juvenile Delinquency
- Crime and Correction etc.
- Management of Social Welfare Department and Organization
- Disaster Management
- Industrial Social Work
- Issues concerning Advocacy and Networking

The list is not exhaustive; it's only an exemplary list which enlists broad areas which is very frequently studied by social workers. Again, within one or more problem areas research population and the services available might focus on individuals, families, groups, community organizations or broad social systems. It might deal with characteristics of a larger population and the services available to them.

Objectives

The objective of this study is to examine the Knowledge, Attitude and Practice behavior or pattern of Maternal and Child Health Care Practices among the rural women in Badroan block in Mau, Uttar Pradesh. The objectives are:

- To study the socio-economic background characteristics of married women aged 15-49 years.
- To study the Knowledge, Attitude, Practices about Maternal and Child Health Care Services among married women aged 15-49 years.
- To examine the association between Knowledge, Practice and selected background characteristics among he married women aged 15-49 years.
- To understand the socio-economic factor influencing the practices behavior regarding mother and Childs health.
- To promote community participation through advocacy, communication and social mobilization.
- To give suggestions related to their health practices.

Hypothesis

A hypothesis may be defined as a proposition or a set forth as an explanation for the occurrence of some specified group of phenomenon either asserted merely as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts. Quite often a research hypothesis is a productive statement, capable of being tested by scientific methods that an independent variable to some dependent variable.

We can say that a hypothesis states what we are looking for and it is a proposition which can be put to determine its validity. A good hypothesis holds the following characteristics:

- Hypothesis should be clean and precise.
- Hypothesis should be capable of being tested.
- Hypothesis should state relationship between variables, if it happens to be relational hypothesis.
- Hypothesis should be limited in scope and must be specific.
- Hypothesis should be stated as far as possible in most simple terms so that the same is easily understandable by all concerned.
- Hypothesis should be consisting with most known facts.
- Hypothesis should be amenable to testing within a reasonable time.
- Hypothesis must explain the facts that gave a rise to the need for explanation.

The present analysis attempts to examine the following hypothesis:

- Knowledge, Awareness and Practice (KAP) about health care services increase the chance of better practice among the married women's (15-49 years).

- The child health care practices of educated women are not different from uneducated women.
- Maternal education affects women's health seeking behavior.

Subjected Study Area

In this study, an attempt is made to study the background characteristics of the beneficiaries, in the order to understand the factors which determine the practice maternal and child health services in the Badroan block in Mau. In order to attain the objectives of the study, it was felt that primary and secondary data collection was required and hence a rural population was selected in Uttar Pradesh.

For the present study, Mau district has been selected as the study area, which is grown as industrial town in Uttar Pradesh.

Mau formerly Mau Nath Bhanjan, is an industrial term in Uttar Pradesh, India. Located nearly 120 km from Varanasi on the banks of Ghaghara (Saryu), it is a major center of the textile weavers. It is divided into 4 tehsil, 9 blocks, 596 grams Panchayat and 1644 villages, the Tamsa river flows through the city. In 1960's it was the biggest supplier of a plant called splash. The city of the headquarters of the Mau district.

Background History of Subjected Area

District Mau has been cast out from district Azamgarh. It has a very rich historical background from the Prato historical period. The Archeological survey of India has found some records like coins of the kind Kanishka's period.

During the region of Sher Shar Suri, the famous emperor who defeated Humayun, Visited Kolhuvavan (Madhuban) to meet the great Sufi saint A Syed Ahmen Wadva Mahvani, one of the daughters of Sher shah was settled permanently near the dargah of Syed Sahab. Various development works were undertaken by Sher Shah Suri during his region for economic development of the Mau region After

Humayun had retaken India, it is mentioned in the historical book of Ziaudeen Barni saying that his son Akbar the Great passed through Mau, on his way towards Allahabad.

During the construction of a military base and the Shahi Masjid, a large number of laborers and artists came with the Mughal army. They, the weavers etc. had originally come from Iran, Afghanistan and Turkey, they settled there permanently.

During the period of India's struggle for freedom the residents of Mau gave their full support to the movement. Pandit Algu Rai Shastri a great under and Indian freedom fighter facts about Pandit Algu Rai shastri ji was Affiliated to Indian National Congress Constituency Azamgarh (UP) Lok Sabha Constituency member of Parliament member of 1952 member little MP, offer to Mahatma Gandhi come to Dohrighat on 3 October 1939 during the 3rd salt breaking movement many persons of Mau actively took part.

During the 1942 Quit India Movement a mob had collected in outrage of an action by a Madhuban Police Station officer, collector, Navlate was present there. He ordered his men to open fire on the mob killing and injuring Raghunath Bhar, Kanhye bhar etc.

In memory of the Shaheeds of that day a movement was built on the site where the shaheed had made the ultimate sacrifice. In the 1970's and early 1980's many people like Jharkhandey Rai, Tejpal Singh, worked hard for social empowerment in Mau.

A village in Mau called Sonadih is famous for dhierree's way to studying in Baba Thanidas Ji Temple. Shitala Mata Mandir and Vandevi is two important temples in Mau. Shitala Mata temple is located near state highway 34; beside Mirzahadipura of this city.

Mau was an important township of Azamgarh district before its creation as a district itself. On 19 November 1988 it was made a district, largely due to efforts of the late Kalpnath Rai (MP Ghosi). The local language of Mau is peculiar to the area as it includes the dialects of Bhojpuri, Persian, Turkish, and Irani. The main Industrial setup here is of cloth making by power loom due to the presence of a large number of weavers in the district Sori, Lungi and other cloths being prepared there are exported to various states of India and also to various countries.

Geography & climate of Subjected Area

Mau (Mau Nath Bhanjan) is situated on the fertile plains of Ganga Ghaghara doab. It liner between 83⁰17' to 84⁰52' East & 24⁰ 47' to 26⁰ 17' North. At its North, Ghaghara River 10 on the border, Ghazipur district is on the south, Ballia district is on the west side. This district represents geographical characteristics of mid Gangetic plain. "Khachar" and "khaddar" are types of soil found in the areas of north of Azamgarh - Ballia Road, In some high place "Bangar" soil 10 also found In the southern part of the district, river flows 10 absent, due to which that area has Bangar type of soil, which is not fertile The river system of the district is dominated by the Tom River and its tributary Choti Sarju. The Ghaghara River forms the northern border of the district the main means of irrigation in the district are tube wells. Ponds are used mainly for fishing and bird sanctuary purposes. In Mau "Pakari Piua" pond have 1.7 km breadth and 32 km length. It also has two big ponds (Tal) one Rotary Tal near Madhuban and Ghaghara Tal near Ratanpura.

Mau District Population 2011

According to census, 2011 Mau had population of 2, 205, 170 of which male and female were 1, 114, 888 and 1,090,282 respectively. In 2001 census, Mau had population of 1,85,3,997 of which male were 933,523 and remaining 920,474 were female. Mau district population constituted 1.10 Percent of total Maharashtra population.

Average literacy rate of Mau in 2011 were 75.16 compared to 62.16 of 2001. If things are topped out at gender wise, male and female literacy were 84.61 and 65.59 respectively.

With regards to sex ratio in Mau, it stood at 978 per 1000 male compared to 2001 census figure of 986. The average national sex ratio in India is 940 as per later reports of census 2011

Mau District Rural population 2011

As per 2011 census 77-34% population of Mau districts liver rural areas of villages The total Mau district population living in rural areas in 1,705,386 of which males and females are 858,391 and 846,995 respectively. In rural areas of Mau district, sex ratio is 987 females per 100 males. Literacy rate in rural areas of Mau district is 73.95% as per census data 2011.

Gender wise male and female literacy stood at 84.55 and 63.44 percent respectively. In total, 1,073,360 people were literate of which males and females were 613,675 and 459,685 respectively.

Research design

“A research design is the arrangements of conditions for collecting and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.”(Claire Selltiz and others, 1962)

Research design has been defined by various social scientists differently. Some say it is planned sequence of the entire process involved in conducting a research study. Other say a research design designates the logical manner in which individuals and other units are compared and analyzed, it is the basis of making interpretations from the state. All these definitions emphasis systematic methodology in collecting accurate information for interpreting economy and procedure. It could therefore be said that the research design is a plan structure and

strategy of investigation concerned so as to obtain answer to research questions and control variance.

Characteristics of a Good Research Design

- The designing aspect of a research study especially in the field of social sciences is very complex process.
- The selection of a method or methods of logic and the planning of the design in time do not guarantee sound results. They are only the first steps.
- The research design, at the most, is a blue print and therefore, at best it is only tentative.
- It is definitely useful to extent of laying dawn a series of guide posts to keep one headed in the right direction.
- Every design has its own strengths and weakness and at the same time there is no such thing as a single correct design.
- A good research design satisfy the following four conditions :objectivity reliability, validity, and generalizability of the findings.

Objectivity

- It pertains to the methods of collation of data and scoring of the responses. The objectivity of the procedure may be judged by the degree of agreement between the final scores assigned to different individuals by more than independent observer. The more subjective the observations recording and evaluation of the responses, the less the different observers agree.
- The investigators who use close ended questionnaires(questionnaires in which each item is supplied with certain alternatives, thus forcing the respondents to choose one among them) are said to be collecting data with

objective tool, because all the scores can apply a scoring key and agree perfectly on the results.

- Thus any research design should permit the use of necessary instruments, which are fairly objective in which every observer, or judge seeing a performance arrives at precisely the same report. This ensures the objectivity of the collected data, which could be used for the analysis, interference's and generalizations.

Reliability

- Reliability refers to consistency throughout a series of measurements.
- In other words, if a respondent given out a response to a particular item, he is expected to give the same responses to that item whenever he is asked subsequently.
- However, if the respondent keeps on changing his/her responses to the same item when he is asked repeatedly, then the investigator will be facing a difficulty in considering which one of these responses is the genuine response.
- So the investigator should frame his/her item in such a way that the respondents cannot but give only one genuine response. There are different item determine the reliability of the responses given out by a respondent. Some of these methods are: “using check items”, administering the same tests repeatedly, using a series of parallel forms, etc.

Validity

- Any measuring instrument is said to be valid when it measures what it purposes to measure.
- For example, an “intelligent test” (IQ), constructed for measuring intelligence, should measure intelligence and nothing else.

Generalization

- It refers to the fact that how best the data collected from a sample can be utilized for drawing certain generalizations, applicable to a larger group (population) from which the sample has been drawn.
- A research design, thus, helps an investigator in his attempt to generalize the findings, provided he has taken due care in defining the population, selecting the sample and using appropriate statistical analysis while planning his research.

A research design is a plan according to which observations are made and data assembled. It provides the empirical and logical basis for drawing conclusions and gaining knowledge. There are different kinds of research designs. They vary from general and sketchy statements of intent to carefully detailed and highly complex investigations. The research designs can be divided into four types viz. descriptive, diagnostic, exploratory and experimental. Whichever type of research design the investigator selects, it is important that's/he should have a research design and the design should be made explicit the research begins. The quality of results and the degree of confidence that the researcher can place ,depends upon the design according to which the data were collected .It is important for social scientist to know the uses and the strengths and weakness of each type of research design.

Research Design basically can be four types:

1. Exploratory Research Design
2. Descriptive Research Design
3. Diagnostic Research Design
4. Experimental Research Design

1. Exploratory Research Design

Exploratory Research Design is a type of research conducted because a problem has not been clearly defined. Exploratory research helps determine the best research design, data collection method and selection of subjects. Given its fundamental nature, exploratory research often concludes that a perceived problem does not actually exist.

The objective of exploratory research is to gather preliminary information that will help define problems and suggested hypothesis. (Kotler, 2006)

Exploratory Research often relies on secondary research such as reviewing available literature and/or data, or qualitative approaches such as informal discussions with consumers, employees, management or competitors, and more formal approaches through in-depth interviews, focus groups, projective methods, case studies. The internet allows for research methods that are more interactive in nature: E.g., RSS feeds efficiently supply researchers with up-to-date information; major search engine search results may be sent by mail to researchers by services such as Google Alerts; comprehensive search results are tracked over lengthy periods of time by services such as Google Trends; and web sites may be created to attract worldwide feedback on any subject.

The results of exploratory research are not usually useful for decision making by themselves, but they can provide significant insight into a given situation. Although the result of qualitative research can give some indication as to the “why”, “how”, “when” something occurs, it cannot tell us “how often” or “how many.”

A defining characteristic of casual research is the random assignment of participation to the conditions of the experiments; e.g., an Experimental and a control condition. Such assignment results in the groups being comparable at the beginning of the experiment. Any difference between the groups at the end of the experiment is attributable to the manipulated variable. Observational research

typically looks for difference among “in-tact” defined groups. A common example compares smokers and non- smokers with regard to health problems. Casual conclusions can’t drawn from such a study because of other possible differences between the groups; e.g., smokers may drink more alcohol than non-smokers. Other unknown differences could exist as well. Hence, we may see a relation between smoking and health but a conclusion that smoking is a cause would not be warranted in this situation.

The exploratory method represents the earlier stage of science. (According to Katz) It implies that all sciences must have at the beginning had an approach, which was purely exploratory. Even in practical life, if we go to a doctor for some treatment, he systematically explores the complaints and tries to categories our symptoms. On the basis of exploration, he arrives at a conclusion, at least, tentatively, about the disease. All these steps, starting with exploratory questions helps him or her to arrive at correct diagnosis. This approach clearly points out the universality of exploratory approach, which cuts across the barrier of natural and social sciences. The social scientist has the freedom to follow interesting leads and to utilize her/his own ingenuity in obtaining information. However she/he should exercise judicious temperance in this approach. The major advantage of the exploratory method lies in its ability to generate may ideas that could be further explored in more controlled conditions, apart from overcoming the most difficult portion of an inquiry, which is its initiation. In order to attain research objectivity the exploratory method should adopt the following steps:

- Review up of social science and other pertinent literature; it helps in deriving workable hypothesis with precise meaning.
- Survey of people who had practical experience with the problem to be studied because they are in a position to through light on the subject matter of interest to the investigators.

- The analysis of insight stimulating examples, social scientists working in an area which is yet to be explored, which incidentally is the usual experience of an innovative social scientist, have found the intensive study of the selected samples to be a particularly fruitful methods of stimulating insight.
- Profound changes in our conception of the relationship between man and society have been brought out largely intensive anthropological studies of primitive cultures.
- An investigator should remember that his inquiry is constantly in the process of reformulation and redirection as new information is obtained.
- Lastly, the approach is characterized by its reliance on integrative power of the investigators, on his ability to draw many diverse butts of information into a unified interpretation.
- Exploratory studies have been conceptualized at two levels: the first level is the discovery of the significant variable in the situation and the seconds is the discovery of relationships between variables.
- It is imperative for the investigator to delineate the area to be studied specially at the first level. Exploratory studies which do not set limits for themselves have limits imposed by various practical matters, some of which may not be released by the investigator at the formative stages.

Descriptive Research Design

Descriptive Research studies are those studies which are concerned with describing the characteristics of a particular individual, or a group, whereas diagnostic research studies determine the frequency with which something occur or its association with something else. The studies concerning whether certain variables are associated are examples of diagnostic research studies. From the point of view of research design, the descriptive as well as the diagnostic studies

share common requirements and such it can group together these two types of research studies .In both the studies the researcher must be able to define clearly, what he wants to measure and must find adequate methods of measuring it along with a clear cut definition of population he wants to study. Since the aim is to obtain complete and accurate information in the said studies, the procedures to be used must be carefully planned. The research design must make enough provisions for protection against bias and must maximize reliability, with due concern for the economical completion of the research study. The design in such studies must be rigid and not flexible and must focus attention on the following:

1. Formulating the objective of the study
2. Designing the methods of data collection
3. Selecting the sample
4. Collecting the data
5. Processing and analysis data
6. Reporting and findings

Experimental Research Design

Experimental Research Design is used for the controlled testing of casual processes. The general procedure is one or more independent variables are manipulated to determine their effect on a dependent variable. These designs can be used where:

- There is time priority in a causal relationship (cause precedes effect),
- There is consistency in a causal relationship (a cause will always leads to the same effect),
- The magnitude of the correlation is great.

The most common applications of these designs in marketing research and experimental economics are test markets and purchase labs.

This is based on experiments conducted in a laboratory. It is also known as laboratory research. An experiment in social sciences is not only different but also more difficult than an experiment in natural sciences. A student in natural sciences deals with things that are palpable, tangible and more often than not inert, and consequently more amenable to the rigours of an experiment. The likelihood of an error creeping into an experiment in the natural science probably is more due to the person performing the experiment, rather than the substance, which is being subjected to the experimental verification. On the other hand, in social sciences, in addition to the danger of an error on the part of the researcher, there is also the difficulty to understanding what is being measured. The phenomenon in social sciences may themselves be intrinsic states of the organism, and may have to be measured as inferred properties. There is also every likelihood that the substance is less amenable to the rigours of an experiment.

To find out the Knowledge, Awareness and Practices of Maternal and Child Health Care services among the married women, *Descriptive Research Design* had been used by the researcher.

Sampling

Universe

In any statistical investigation often called statistical survey, observations are made on a group of objects or individual called elementary units as they are without any interference. The aggregate of individuals under study in any statistical survey is called a population.

According to *A.C. Rosander*, “**A population is the totality of objects under consideration.**”

In other words of *Simpson and Kafka*, “A universe or population may be defining as an aggregate of items possessing a common trait or traits.”

In simple language, a population or universe can be defined as any collection of persons or objects or event in which one is interested. Universe or population differs for each research problem depending upon the nature and type of information sought.

In other words a population consists of the people who are related to the specific problem under investigation e.g., if we are studying the relationship between the class achievements of the university students and the methods of teaching then the students of any place and of any time will come under our population. If we are studying the voting behavior or political participation of the citizens of India, living in India or outside will come under population.

Sample and Sample Size

A part of population selected to something about the population is called a sample. The number of individuals selected in a sample is called a sample size.

Sampling

The research is a systematic study to examine or investigate the issue or problem or find out the relevant information for solution .For study data are to be collected from the respondents. It is not possible to collect data from every one of the population. Population is a very large number of persons or objects or items which is not feasible to manage .A population is a group of individuals, persons, objects or items from which samples are taken for measurement. For research purpose a part of the population is to be selected .Sampling is the process in which a representative part of a population for the purpose of determining parameters or characteristics of the whole population is selected. This is called a sample. It is easier to contact a smaller part of the population for the data .It can be done within a limited time, efforts and with minimum cost. For selection of a sample special care

should be taken that the sample is proper representative of the whole population. Every segment of the population should be included but the number should not be very large which may become difficult to manage within time and cost limits. When information is required to study a particular problem decision may be taken to collect primary data by using either a census or a sample keeping in mind the money or time required, it was decided to use sampling method which helps to know the characteristics of the population by examining only a small part of it.

There are different types of sample designed based on two factors, the representation basis and the element selection technique. On the representation basis, the sample may be Probability sampling or it may be non-probability sampling. Probability sampling is based on the concept of random selection, whereas non-probability sampling is non-random sampling. On element selection basis, the sample may be either unrestricted or restricted. When each sample element is drawn individually from the population at large, the sample so drawn is known as unrestricted sample, whereas all other forms of sampling are covered under the term restricted sampling. Sampling designs are basically of two types, non-probability sampling and probability sampling.

Probability Sampling

Probability sampling is also known as random sampling. Under this sampling design, every item of the universe has an equal chance of inclusion in the sample. Random sampling from a finite population refers to that method of sample selection which gives each possible sample combination an equal probability of being picked up and each item in the entire population to have an equal chance of being included in the sample. Probability sampling methods are of three types:

- (a) Simple Random Sampling
- (b) Stratified Random Sampling
- (c) Cluster Sampling

Non-probability Sampling

Non-probability sampling is that sampling procedure which does not afford any basis for estimating the probability that each item in the population has of being included in the sample. Non-probability sampling is also known by different names such as deliberate sampling, purposive sampling and judgment sampling. Under non-probability sampling the organizer of the inquiry purposively choose the particular units of the universe for constituting a sample on the basis that the small mass that they so select out of a huge one will be typical or representative of the whole. This is a biased type of sampling bears large sampling errors. This type of sampling is rarely adopted in large and important purpose. However for the research purpose this may be taken by the researcher scholar. Some important techniques of non- probability sampling methods are-

- (a) Quota Sampling
- (b) Purposive Sampling
- (c) Systematic Sampling
- (d) Snow ball Sampling
- (e) Double Sampling

(a) Quota Sampling

A quota sample is a convenience sample with an effort made to insure a certain distribution of demographic variables. Subjects required are recruited as they arrive and the researcher will assign them to demographic groups based on variable like age, gender. When the quota for a given demographic group is filled, the researcher will stop recruiting subjects from that particular group. In quota sampling, the population is the first segmented into mutually exclusive sub groups, just as in stratified sampling.

Quota Sampling is useful when time is limited. Sampling frame is not available, research budget is very tight or when detailed accuracy is not important.

This is the non - probability versions of stratified sampling. Subsets are chosen and then either convenience or judgment sampling is used to choose people from each subset.

Quota Sampling is the type of judgment sampling and perhaps the most commonly used technique in non -probability category. In Quota sample, quotas are set up according o some specified characteristics viz. income group, age group, political group, and religious affiliation etc. Each interviewer is then told to interview a certain number of persons which constitute his quota with in the quota; the selection of sample items depends on personal judgment.

For example, in a radio-listening survey, the interviewer may be told to interview 500 living in a particular area and out of that every 100 persons interviewed 60 are to be house wives, 25 farmers and 15 children under the age of 15, within these quotas, the interviewers is free to select the people to be interviewed. The cost per person interviewed may be relatively small for quota sample but these numerous opportunities for bias, which may invalid the results.

(b) Purposive Sampling

“Deliberated sampling” or “Judgmental Sampling”

When the researcher deliberately selects certain units from the universe, it is known as purposive sampling. However, it must be kept in mind that the units selected must be representative of the universe.

Merits

- Quota sampling is a stratified cum purposive sampling and thus enjoys the benefits of both samplings.
- It proper controls or check are imposed, it is likely to give accurate results.

- It is only method when no sample frame is available.

For this research study purpose out of different sampling methods the non-probability sampling has been selected.

The primary sampling units vary considerably in size and as is often the case, simple Random sampling does not take in to account the possible importance of larger primary sampling unit in the rural area. In order to overcome this problem of large differentials in size, the purposive sampling technique has been selected the desired number of (sample) respondents in the block. Purposive sampling is also non random sampling method, here the investigator selected the sample arbitrary which he considered important for the research and believes it as typical and representative of the population.

Selection Criteria and Sampling

Only woman of with at least one child aged less than 24 months were eligible for interview. All information pertaining to maternal practices concerning child health was taken in reference to the youngest child only. A purposive sample of 200 women was taken. A total of 200 women were covered in the period of 6 weeks who brought the child on Community Health Centre. All interviews were conducted by the researcher itself. Each of the 200 mother interviewed gave informed consent and all data were include for analysis. Data from the interviews were translated from Hindi to English on individual copies of the questionnaire.

The steps involved in this procedure are as follows:

Sources of data collection

For the study both primary and secondary data are used. The primary data collected from the mothers of the child aged 0-24 months who have recently visited the CHC .The secondary data collected from record of Census report, NFHS reports, Journals, newspapers, internet and CHC reports. The primary and secondary data have been collected to cover every aspect of the study. The primary data are related

to behavior and responses of the mothers of child. The secondary data shows the status of health services and practices behavior related to maternal and child health. These data used in combination as per need of the study. These data have been different merits and demerits and have serves our purpose of the research study. These are explained below:

Primary Data

Primary data are those which are collected for the first time and are always given in the form of raw material and in character. These types of data need the Application of statistics methods for the purpose of analysis and interpretation.

Primary data are information collected by the researcher specifically for the research assignment. Primary data are original in nature and directly related to the issue or problem and current data. Primary data are the data which the researchers collect through various methods like interviews, surveys, questionnaires, etc. The primary data have own advantages and disadvantages.

Advantages of primary data

Advantages of Primary data are as follows:

- The primary data are original and relevant to the topic of the research study so the degree of accuracy is very high.
- Primary data is that it can be collected from a number of ways like interviews, telephone surveys, focus group etc. It can be also collected across the national borders through emails and post. It can include a large population and wide geographical coverage.
- Moreover, primary data is current and it can better give a realistic view to the researcher about the topic under consideration.
- Reliability of primary data is very high because these are collected by the concerned and reliable party.

Disadvantages of Primary data

Following are the disadvantages of the primary data:

- For collection of primary data where interview is to be conducted the coverage is limited and for wider coverage a more number of researcher are required.
- A lot of time and efforts are required for data collection. By the time the data
- Collected, analyzed and report is ready the problem of the research becomes very serious or out dated. So the purpose of the study may be defeated.
- It has designs problems like how to design the surveys. The questions must be simple to understand the respond.
- Some respondents do not give timely responses. Sometimes, respondents may give fake, socially acceptable and sweet answers to cover up the realities.
- With more people, time and efforts involvement the cost of data collection goes high. The importance of research goes down.
- Trained persons are required for the data collection. In experienced persons in data collection may give inadequate data of the research.

Secondary Data

The secondary data are those which have already been collected by someone other than the investigator himself, and as such the problems associated with the original collection of data do not arise here. The secondary data can be collected by directly either from published or unpublished sources. Secondary data are the data collected by the party not related to the research study but collected these data for some other purpose and at different time in the past. If the researcher uses these data then these becomes secondary data for the current users. These may be available in written, typed or electronic forms. Secondary data is also used to gain initial insight into the research problem. Secondary data is classified in terms of its sources-either internal or external .Internal, or in house data, is secondary information acquired within the organization where research has been carried out. External secondary data

is obtained by outside sources. There are various advantages and disadvantages of using secondary data.

Advantages of Secondary data

Advantages of secondary data are following:

- The primary advantages of secondary data are that it is cheaper and faster to access.
- Secondly, it provides a way to access the work of the best scholars all over the world.
- Thirdly secondary data gives a frame of mind to the researcher that in which direction he /she should go for the specific research.
- Fourthly secondary data save time, efforts and money and add to the value of the research study.

Disadvantages of secondary data

Following are the disadvantages of secondary data:

- The data collected by the third party may not be reliable party so the reliability and the accuracy of data go down.
- Data collected in one location may not be suitable for the other one due environmental factor.
- With the passages of time the data becomes obsolete and very old.
- Secondary data collected can distort the result of the research .For using secondary data a special care is required to amend or modify for use.
- Secondary data can also raise issues of authenticity and copyright.

Keeping in view the advantages and disadvantages of sources of data requirement of the research study and time factor, both sources of the data i.e. primary and secondary data have been selected. These are used in combination to give proper coverage to the topic.

Tool of Data Collection

Data collection is a term used to describe a process of preparing and collecting data. For example as part of a process improvement or similar project. The purpose of data collection is to obtain information to keep on records, to make decisions about important issues, to pass information on to other. Primarily, data is collected to provide information regarding a specific topic. Data collection usually takes place early on in improvement project, and often formalized through a data collection plan which often contains the following activity.

1. Pre collection-Agree goals, target data, definitions, methods
2. Collection-data collection
3. Present findings-usually involves some form of sorting analysis and/or presentation.

Prior to any data collection, pre collection activity is one of the most crucial steps in the process. It is often discovered too late that the value of their interview information is discounted as a consequence of poor sampling of both question and informants and poor elicitation techniques. After pre collection activity is fully completed, data collection in the field, whether by interviewing or other methods, can be carried out in a structured, systematic and scientific way. A formal data collection process is necessary as it ensures that data gathered is both defined and accurate and that subsequent decisions based on arguments embodied in the findings are valid. The process provides both a baseline from which to measure from and in certain cases a target on what on what to improve.

For collection of the data the following tools have been used:

(a) Questionnaire

Questionnaire is a set of questions has been prepared to ask a number of questions and collect answers from respondents relating to the research topic. A

number of questions usually in printed or electronic form are to be answered by the individuals. The forms often have blank spaces in which the answers can be written. Set of such forms are distributed to groups and the answers are collected relating to the research topic. A questionnaire is a series of questions asked to individuals to obtain statistically useful information about a given topic .When properly constructed and responsibly administered, questionnaire become a vital instrument by which statements can be made about a specific groups or people or entire population .Inappropriate questions, incorrect ordering of questions, incorrect scaling, or bad questionnaire format can make the survey valueless, as it may not accurately reflect the views and opinions of participants. A useful method for checking a questionnaire and making sure it is accurately capturing the intended information is to pretest among a smaller subset of target respondents .In a research or survey questions asked to respondents, and designed to extract specific information. It serves four basic purpose: to (1) collect the appropriate data, (2) make data comparable and amenable to analysis, (3) minimize bias in formulating and asking question, and (4) to make questions engaging and varied . For our study purpose a set of questions has been prepared to collect information relating to the topic of the study. In this study a structured questionnaire has been used with different types of questions such as close ended and open ended. Special case has been taken to select the scale for the questions for collection of responses very effectively.

(b) Telephone, Mobile phone and Facsimile

Telephone and other devices can be used for collecting data verbally and written or fax from respondents located away from the researcher and having these facilities plus the researcher having their contact numbers .Use of interviewers encourages sample persons to respond .leading to higher response rate. Interviewers can increase comprehension of questions by answering respondent's questions. It is fairly cost efficient, depending on local call charge structures .It is good for large national and international respondents and gives wider coverage. It

cannot be used for non-audio information (graphics, demonstrations, taste/smell samples) this instrument is not suitable for the respondents where the telephone facility is not available.

(c) Mail

For collection of data from the respondents who are located at a long distance and do not have any communication facility. They can be contacted through mailed questionnaire .Only thing is required that the researcher should have the postal address of the respondents .The questionnaire may be handed to the respondents or mailed to them, but in all cases they are returned to the researcher via mail. The cost involved is very less but not clarification can be given to the respondents if required .Respondents can answer at their own convenience .The respondents cannot be biased by the researchers and the detailed information can be collected for the research purpose. Only one disadvantage this instrument gives is that the response rate is very less due to lack of interest in the topic of respondents and low literacy rate.

(c) Interview

In this method the interviewer personally meets the informants and asks necessary questions to them regarding the subject of enquiry. Usually a set of questions or a questionnaire is carried by him and questions are also asked according to that. The interviewer efficiently collects the data from the informants by cross examining them .The interviewer must be very efficient and tactful to get the accurate and relevant data from the informants.

Interviews like personal interviews /depth interviews or telephone interviews can be conducted as per the need of the study.

Advantages

Advantages of interview are following:

- In this method information can be gathered from illiterate people to.

- There are no chances of non-response as the interviewer personally collect data.
- The collected data is very reliable since the interviewer tactfully collects the data by cross examining the respondents.

Disadvantages

The major disadvantages of interview are:

- There is a chance of bias.
- The informants may not answer some personal questions.
- It is a time consuming process.
- Money and manpower requirements are very high.
- Sometimes an interviewer is involved in pressure rising respondents to share their personal information.

(e) Interview Schedule

This method of data collection is very much like the data collection of data through questionnaire ,with little difference which lies in the fact that schedule (proforma containing a set of questions) are being filled in by the enumerators who are specially appointed for the purpose .These enumerators along with the schedules go to the respondents put to them the questions from the proforma in the order the questions are listed and record the replies in the space meant for the same in the proforma. In certain situations, schedule may be handed over to respondents and enumerators may help them in recording their answers to various questions in the said schedules. Enumerators explain the aims and objects of the investigation and also remove the difficulties which any respondents may feel in understanding the implications of the particular question or the definition or concept of difficult terms.

This method require the selection of enumerators for filling up schedules or assisting respondents to fill up schedules and such as enumerators should be very

carefully selected .The enumerators should be trained to perform their jobs well and the nature and scope of the investigation should be explained to them thoroughly so that they may well understand the implications of different questions put in the schedule.

An Interview Schedule is an interview with pre coded questions to produce quick, cheap and easy quantitative data which is high in reliability but low in validity. These methods are favored by positivists but shunned by interactionists.

According to Goode & Hatt; A set of questions which are asked by an interviewer and filled in on the spot in a face to face interaction with another person.

Advantages

- It leads to more responses.
- Accurate information can be collected.
- It is free from biasness.
- Personal contact between the investigator and respondents.
- More difficult situation can be studied.
- It is used for educated as well as uneducated respondents.

Disadvantages

- It is more expensive and costly.
- It is more time consuming.
- Wide range coverage is not possible.
- It required skilled and experienced investigators.

To study the topic of the research out of available instruments for research mainly Interview Schedule, interview have been used because these instrument were found suitable for data collection purpose. To collect desired information of household and individuals level following schedules were pre tested.

The interview Schedule focuses on KAP of matters regarding child health diarrhea, immunization, Breastfeeding practices and nutrition for their children as well as focused on maternal health, reproduction health and full ANC for their own health. Awareness that certain environmental factors, such as contaminated water and negligence of nutrition status are harmful for children must exist (**Knowledge**). The mothers must then become engaged by and decide to act upon this knowledge (**Attitude**). Finally the mother is action upon the issue and possibly working her way to maintain this action (**Practice**).

Data Processing

After data collection, has to be processed and analysis in accordance with the outline laid down for the purpose at the time of developing a research plan. Technically speaking, processing implies editing, coding, classification, and tabulation of collected data so that they are amenable to analysis. The unwieldy data should be condensed into a few manageable groups and tables for further analysis. The raw data should be into some purposeful and usable categories. Coding operation is usually done at this stage through which the categories of data are transformed into symbols that may be tabulated and counted. Editing is the procedure that improves the quality of the data for coding. With coding the stage is ready for tabulation. Tabulation is the part of technical procedure wherein the classified data are put in the form of tables. The data collected were coded, verified and processed on computer. Only data file were prepared. However the single frequency distribution of each variable was generated to validate the data.

Variables Studied

In order to attain the objective of the study, information on various background characteristics (social, economic, demographic, and cultural) of the respondents was collected. However, the variables which have been taken in to account in this study are based on relevant Heretical grounds. Moreover, for a dear understanding of the nature of these variables further classification of different

factors was done. The justification of knowledge and practice of maternal and child health care services are depending on these variables.

Dependent Variable

Knowledge of mothers practicing of maternal and child health services

Practices of mother regarding maternal and child health services

Independent Variables

Social factors (Caste, Religion)

Education, Economic factors) occupation, Economic status)

Demographic factors. (Age, Sex)

Health factors (Health facilities)

Data Analysis

Data analysis refers to a process, which entails an effort to formally identify themes and to construct hypothesis as they are suggested by data and an attempt to demonstrate support for these hypothesis. Data analysis is often a time consuming and pain staking process. The particular technique to be followed and the amount of time depend upon the quantity of field notes and the research goals. Once the observers have collected what they feel all the sufficient data to understand those aspects of settings in which they are interested they leave the field to engage in a period of intensive analysis. Although there is no precise formula, which enables the researchers to construct hypotheses and recognize them, some suggestion, given below could be helpful.

- All data (field's notes, observer comments, and other materials) should be carefully read.

- The important conversation topic should be coded, read, sorted, and examined for patterns.
- Typologies or classification schemes can be useful aids in forming hypotheses and discovering themes the purpose of typologies is merely to sensitize to subtle aspects of the setting that may have otherwise overlooked.

Literature pertinent to researcher interest and research setting must be read thoroughly. After formulation of hypothesis, the researcher should turn to an analysis of the extent to which they are supported by data and the conditions under which they hold true. The exact number of hypothesis the researcher seeks to analyze will depends upon the quality and quantity of data and his/her own interests and goals.

Analysis after tabulation is generally based on the computation of various percentages, coefficients, etc., by applying various well defined statistical formulae. In the process of analysis, relationships or differences supporting or conflicting with original or new hypothesis should be subjected to tests of significance to determine with validity data can be said to indicate any conclusions. In order to meet the objectives, the data has been analyzed using appropriate techniques such as univariate analysis, bivariate analysis which helps to come to some conclusion.

The contingency tables are tables of counts in a form of percentage to do the easy comparison and it gives the most common statistic that is percentage difference.

Report Writing

Research report is considered a major component of the research study for the research task remains incomplete till the report has been presented and /or written. As a matter of fact even the most brilliant hypothesis, high well designed and conducted research study, and the most striking generalization and findings are of little value unless they are effectively communicated to others. A really good report

will represent knowledge and wisdom of the report writer on the one hand, his drafting capacity on the other. Good report writing means effective and purposeful communication with the society. The form, content and the style of reporting will determine how the process of diffusing our research experience to the community at large will be set in motion.

In other words the purpose of report is to convey to interested persons the whole result of the study.in sufficient detail and so arranged as to enable each reader to comprehend the data to determine for himself the validity of the conclusions.