

CC-4 **M.A. Semester I**
Research Methodology and Statistics


Unit IV

Research Tools

- a) Observation***
- b) Questionnaire***
- c) Interview***
- d) Case Study***

Prof. (Dr) Anju Srivastava
Department of Home Science
Patna University
srivastava.anju@yahoo.com
9334121405

Observation Method

- 1. Meaning and definitions of observation method**
 - 2. Advantages of observation method**
 - 3. Disadvantages of observation method**
 - 4. Types of observation method**
 - 4.1 Controlled/uncontrolled observation**
 - 4.2 Structured/unstructured observation**
 - 4.3 Participant/non-participant observation**
 - 5. How to improve observation method**
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Research Tools

- **Data collection is defined as the procedure of collecting, measuring and analyzing accurate insights for research using standard validated techniques. A researcher can evaluate his hypothesis on the basis of collected data. In most cases, data collection is the primary and most important step for research, irrespective of the field of research. The approach of data collection is different for different fields of study depending on the information/data that is required.**
- **Anything that is a means of collecting information is called a research tool or a research instrument. For example- observation forms, interview schedules, questionnaires, and interview guides are all classified as research tools.**
- **Research tools can be defined as vehicles that broadly facilitate research and related activities. They enable researchers to collect, organize, analyze, visualize and publicize research outputs.**
- **Data collection tools refer to the devices/instruments used to collect data, such as a paper questionnaire or computer-assisted interviewing system. Case Studies, Checklists, Interviews, Observation, Surveys or Questionnaires are all tools used to collect data.**

Meaning and Definitions of Observation


- **Observation, as the name implies, is a way of collecting data through observing**
- **Observation is the process of using ones senses to gather information about the world**
- **Observation is a technique that involves systematically selecting, watching, listening, reading, touching, and recording behavior and characteristics of living beings, objects, or phenomena.**
- **Observational research (or field research) is a type of co-relational (i.e., non-experimental) research in which a researcher observes ongoing behavior**
- **Observational research is a social research technique that involves direct observation of phenomena in their natural setting. This differentiates it from experimental research in which a quasi-artificial environment is created to control spurious factors where at least one of the variables is manipulated as part of the experiment.**
- **Observation is a way of gathering data by watching behavior, events, or noting physical characteristics in their natural settings. Observations can be overt (everyone knows they are being observed) or covert (no one knows they are being observed and the observer is concealed).**

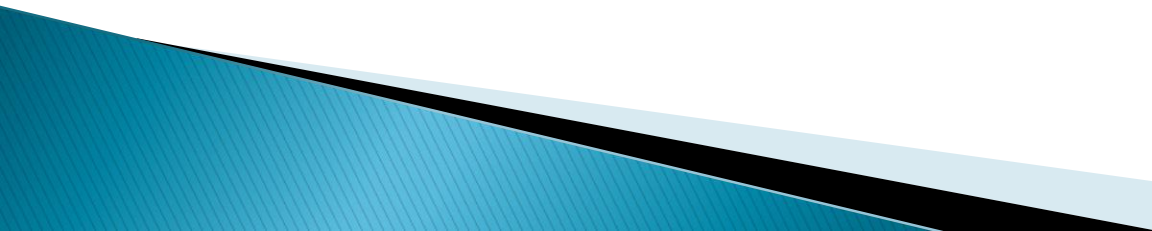
Definitions of Observation

- 1. Observation consists of application of our mind and its cognitive powers to the phenomena which we are studying - P.G. Gilbert**
- 2. Observational studies usually involve an intensive examination of a particular group, event, or social process. The researcher does not attempt to influence what happens in any way but aims instead at an accurate description and analysis of what takes place - Ian Robertson**
- 3. In an observational study the researcher actually witnesses social behavior in its natural setting - Wallace and Wallace**
- 4. Observation is systematic and deliberate study through the eye of spontaneous occurrences at the time they occur - P.V. Young**
- 5. Observation is a purposive or intentional examination of something, particularly for the purpose of gathering facts - Chaplin**
- 6. Observation is most generally any form of examination of events, behaviors, phenomena etc. - Reber & Reber**
- 7. Observational methods, generally, refer to any of procedures and techniques that are used in non experimental research to assist in making accurate observations of events - Ibid**

In general, we can say that observation is a systematic, direct, definite and deliberate examination of the spontaneous occurrences at the time of their occurrence.

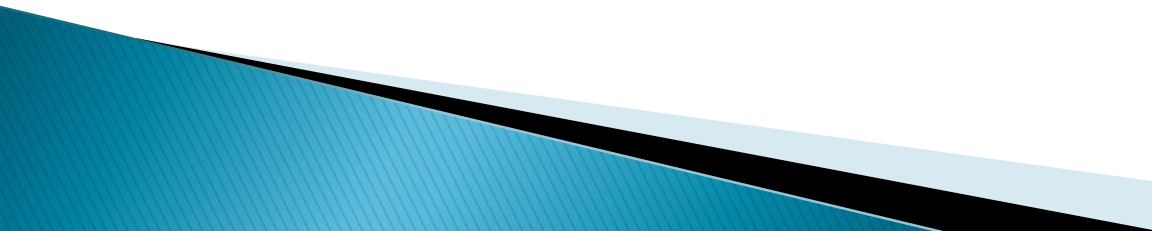
Advantages of Observation Method

- 1. Provides direct access to research phenomena**
 - 2. Can be used in natural or experimental settings**
 - 3. By observing firsthand, researchers can collect, check and record accurate data**
 - 4. Provides direct information**
 - 5. Greater flexibility in terms of application**
 - 6. Generates a permanent record of phenomena that can be referred later**
 - 7. Is one of the simplest methods of data collection and does not require too much technical knowledge**
 - 8. Is one of the best ways to formulate a hypothesis. Researcher can observe and come to know about the activities, perceptions, likes and dislikes to form a theory on their subject**
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- 9. Is one of the most common methods used in all sciences and is very easy to follow and accept**
 - 10. In some instances observation is the only available tool to collect essential data and information**
 - 11. Observation method does not require the willingness of the participant to record. The researcher can observe from a distance and record the findings**
 - 12. Useful in immediate detection of problems**
 - 13. Useful for individuals as well as groups**
 - 14. Very direct method for collecting data or information – best for study of human behavior**
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Disadvantages of Observation Method

- 1. Faces a severe disadvantage because it takes a longer time frame compared to other data collection methods**
- 2. There is a chance of high observer bias in the observation method**
- 3. Several personal behaviors are not open for observation and this proves a limitation in case of observation method**
- 4. There is a high chance of the observer influencing the behavior of a sample group elements**
- 5. Uncertainties of the event cannot determine the actual time when the event will take place, and this is why every occurrence that is open to observation cannot be observed**
- 6. Many of the incidents are abstract like love, affection, feelings etc. and a researcher can't gain exact and correct account of those**
- 7. Social phenomena generalization made by observation are not considered reliable as it cannot be used for lab experiments**
- 8. In some cases, it is seen that two persons observing the same phenomena arrive at different results and this can lead to faulty perceptions**

- 9. Observation method is considered an expensive affair as it requires hard effort, plenty of time and high cost**
 - 10. Potential to overlook meaningful aspects**
 - 11. Observer's presence may create artificial situation**
 - 12. May require training**
 - 13. Cost is a disadvantage of observation method. Under most circumstances, observational data are more expensive to obtain than survey data. The observer has to wait doing nothing, between events to be observed. The unproductive time is an increased cost.**
 - 14. In some cases, the use of observational methods may be unethical, as in observing people without their knowledge or consent**
 - 15. Problems of the past cannot be studied by means of observation**
 - 16. Sampling cannot be brought into use**
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4. Types of Observation Method

4.1 Controlled/Uncontrolled Observation

- **Controlled observation** is carried out in a closed space. It is the researcher who has the authority to decide the place and the time where and when the observation will take place. They also decide who the participants will be and in what circumstances will they use the standardized process

The participants are chosen for a variable group randomly. The researcher observes and records a detailed and descriptive data of behavior and divides it into a distinct category. Sometimes the researcher codes the action as per an agreed scale by using a behavior schedule. The coding can include letters or numbers or a range to measure behavior intensity and describe its characteristic

Controlled observations (usually a structured observation) are likely to be carried out in a psychology laboratory.

- **Uncontrolled observation** takes place in natural setting without the influence of external or outside control. The observer does not plan in advance and it is related to day-to-day happenings and socio-cultural problems. It studies some of our life situations.

4.2 Structured/Unstructured observation

▪ Structured Observation

A highly structured and systematic observation is based on proper and detailed planning. It can also be pre-ordinate, meaning that the researcher will decide in advance what kind of pictures they will be looking for. In this instance, the researcher will already have formulated a hypothesis, problem statement or problem question so that they know what kind of data is needed. Collecting information in image format systematically means that researcher should work according to a plan, which might include venues, time, type of images to collect, etc. Structured observation is often directed at collecting qualitative data although the collection of quantitative data is also possible

This is a systematic observation method where data is collected as per a pre-defined schedule. A specific variable is used in this method for data collection.

▪ Unstructured Observation

An unstructured observation would be where the researcher does not quite know what kind of images they are looking for. In this instance, they will probably work in an unsystematic manner, relying on coming across useful images by chance. A researcher, for example, happens to have video camera with themselves when something happens which can be used in the research. In this case the researcher might not even have decided to embark on research yet. The image or images that they come across might trigger in their mind the need for research. Therefore, they will only now formulate a hypothesis, problem statement or problem question.

The unstructured observation method is conducted in a free and open manner without using any pre-determined objectives, schedules or variables.

4.3 Participant/Non-participant Observation

Participant Observation

Participant observation was first introduced by Prof. Edward Winder Man. It means the activities of a group in which an observer himself participates and notes the situation. They willingly mix with the group and perform their activities as an observer is not merely a participator who criticizes the situation. In other words, he participates and shares the activities with their group. For example, when we study the rural and urban conditions of Asian people, we have to go there and watch what is going on. The best philosophy of participant observation is that we watch the phenomena and not ask. The actual behavior of the group can be observed only by participant observation and not by any other method.

Merits

- ▶ Observer is personally involved in group activities and shares their feelings and prejudices.
- ▶ Observer participates and gets insights into the behavior of the group
- ▶ It motivates and stimulates mutual relationship b/w the observer and observed
- ▶ Observer can get more information with accuracy and precision
- ▶ Information is recorded in front of the group

Demerits

- ▶ Observer may develop emotional attachment to the group which will lose the objectivity of the study.
- ▶ Cannot observe a certain phenomenon in a short time available
- ▶ Cannot cover a wide area through this method.

Non-Participant Observation

Non-participant observation has a lack of participation of the observer in the group activities. They either watch the phenomena from a distance or participate in the group but never in its activities. They only sit in the group but do not generate interest in the process.

The difference between participant & non-participant observation is that, in the former the observer himself takes part in a group, becomes the member of that group and also participates in their activities while the latter refers to no participation of the observer in the group, its membership and activities.


Merits

- ▶ As the observer himself never attaches to the group, the objectivity maintained.**
- ▶ Less emotional involvement of the observer leads to accuracy and greater objectivity.**
- ▶ Through non-participant observation the research remains very smooth.**

Demerits

- ▶ Does not have full knowledge about the group activities.**
- ▶ Cannot understand the whole phenomena.**
- ▶ Cannot get real and deep insight into the phenomena.**

5. How to improve observation method

- 1. Observer's training**
 - 2. Observer's neutral attitude**
 - 3. Control over personal factors**
 - 4. Application of instruments**
 - 5. Increase the observers**
 - 6. Replication of the observation**
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