METHODS OF STUDYING BEHAVIOR

Observational method – case study method – survey method – correlation method –experimental method –Ethical issues in psychological research.

Human behaviors exist in various forms. Some behaviors can be studied directly and some with the help of tests and instruments. No single method can be applied to study all the behaviors. Therefore, psychologists have to adopt a number of methods to study behavior. Some of the important methods employed in psychology are the following.

I. OBSERVATION METHOD

It is one of the oldest methods in behavioral sciences. It implies the observation of an individual or group phenomenon, to draw logical conclusion and generalization. Based on the observation, it is classified into: Participant, Nonparticipant, Naturalistic, Subjective and Objective.

i. Participant observation: In participant observation, the observer actually participates in the event or behavior they are studying. This method is employed in studying certain behaviors in children like play activity, group therapy etc. Participant observation is obstructive. The observer tends to affect the behavior of the subject being observed.

ii. Non-participant observation: In non-participant observation, the observer does not participate in the activities of the behavior being studied. The observer tries to study the behavior from a distance. This method is extensively used in studying behavior in clinical, observational, industrial, social, and other settings.

iii. Naturalistic Observation: Naturalistic observation means observing the behavior in natural settings. Observation of monkeys, bees and ants, in their natural environment contributed a great deal in understanding behavior like

aggression, love, and work habits in animal societies. In these cases events are observed as they occur in nature without manipulating and disturbing the organisms or the environment. This method is employed extensively in studies related to children, animals, birds, insects, etc.

iv. <u>Subjective observation (Introspection)</u>: This is the oldest method in psychology. It is a method known for the study of behavior. It is a method of self-observation in which the subject focuses on his own individual sensations (thoughts, feelings, actions, etc.) analyzes his consciousness and verbally reports the results of the analysis. In other words, introspection means look into the inner self. For example, when in the state of anxiety, fear or anger, one may be asked to discover by one's own observation what he sensed, thought or felt at the time of experiencing that sort of emotion.

v. <u>Objective Observation (Retrospection):</u> In objective observation, the behavior of another person is objectively observed and studies. In other words, we compare our behavior to those of others and try to find out the causes of such behavior.

II. CASE STUDY METHOD

A case study is an in-depth description of a single person. Case studies are prepared by reconstructing the biography of a person on the basis of remembered events, records, and information. Detailed history or case history of a person is obtained by using techniques such as interviews, administration of personality tests and scales. The case history is generally obtained through interviewing the person, his/her parents, other family members, teachers and other associates.

This method is generally employed by psychologists, and psychiatrists for diagnosis and treatment of various kinds of behavioral disorders. This method helps in identifying the causes and factors which have contributed to the person's present problems. The disadvantage of case study is the lack of generalizability.

II. SURVEY METHOD

This method is used to understand the pattern of a particular behavior existing in a group of people. Psychologists use interviews, questionnaires, attitude scales etc. for surveying the behavior of the groups. Survey method is used to obtain information from a large population. Since it is practically impossible to get information from every member of a population, sampling techniques are employed to select a representative group from the population. Survey methods are used to assess consumer reactions to various products, social and political opinions of people etc.

The advantage of this method is that we can collect a large amounts of information without much difficulty. However, its disadvantage is that people may fail to respond accurately and truthfully. They may provide favorable views rather than their true views. In addition, the results of survey are useful only if the persons questioned are truly representative of larger groups to whom the findings are to be generalized.

III. CORRELATION METHOD

In correlation method, a researcher observes two or more variables to determine whether the changes in one are accompanied by changes in the other. In other words, correlation method is used to assess the nature of relationship between two or more variables.

The strength of relationship is represented by a mathematical score ranging from $^{-}1$ to $^{+}1$. A positive score indicates that as the value of one factor increases, we can predict that the value of other factor will also increase. For e.g., if we predicted that the more studying students do for a test, the higher their subsequent grades on the test, and that the less studying they do, the lower their test scores, we would expect to find a positive correlation i.e., from $^{+}0.01$ to $^{+}1$.

On the other hand, for instance, we might predict that as the number of hours spent studying increased, the number of hours spent in recreational activities would decline. Here we are expecting a negative correlation ranging from ⁻ 0.01 to ⁻1.

Sometimes no relationship exists between two factors. For instance, we would not expect to find a relationship between number of hours studied and height. Lack of relationship would be indicated by a correlation close to zero.

IV. EXPERIMENTAL METHOD

Experimental method is considered as the most scientific and objective method of studying behavior. It involves the manipulation of one or more independent variables (IVs) under carefully controlled conditions and the measurement of their effects on one or more dependent variables (DVs). This method is used to study the cause –effect relationship between variables. In experimental research, the investigator systematically varies conditions and records the effects of these variations on behavior.

Through observations, researchers arrive at certain assumptions regarding the cause-effect relationships among various factors. Then they formally put these assumptions in the form of *hypothesis*. A hypothesis is a formal statement of assumed pattern of relationship between two or more factors. The next step is to test whether this assumption if true or not.

In order to test a hypothesis in an experiment, a researcher must first device at least two different experiences or *treatments*. A treatment is a procedure provided by an investigator. One group of participants receives either no treatment or alternative treatments. The group receiving the treatment is known as the treatment group or *experimental group* while the non-treatment or alternative treatment group is called the *control group*. The differing treatments that are given to the two groups are called the experimental conditions.

Before starting the experiment, researchers have to *operationalize* the hypothesis. Operationalization is the process of translating the hypothesis into specific testable procedures that can be measured and observed. For instance, if we were interested in how the number of bystanders affects helping in an emergency situation, we could operationalize 'number of people' as two, three, ten, or any other number; helping as number of minutes that pass before subjects call the police or directly intervene or avert their eyes, or do something else; and the emergency situation as one in which someone breaks a leg or has a seizure or some other type of emergency.

In choosing the operationalization, to be used in an experiment, researchers have to formulate different variables. Any aspect of the experiment that can vary is called a variable. There are mainly two types of variables in an experiment*: independent variable (IV)* and *dependent variable (DV).* The variables that are set, changed, or otherwise manipulated by the experimenter are called independent variables. The dependent variable is the variable that is measured in an experiment and is expected to change as a result of experimental manipulation. For example, consider an experiment designed to test the hypothesis that consumption of alcohol increases aggressive behavior. Here alcohol is the IV and aggressive behavior is the DV. A third type of variable is the intervening variable, which intervenes and affects the relationship between independent and dependent variables. These factors could be either within the subject or in the environment, which affect the relationship between independent and dependent variable. (Genetic factors, personality, situational influences etc. are intervening variables in the above example).

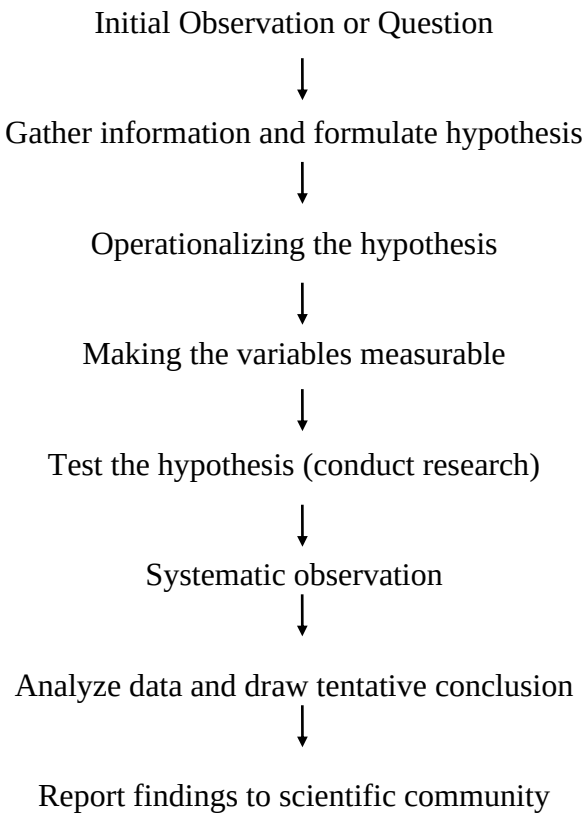
Then the investigator chooses a setting for the study. There are two types of setting. *Laboratory study and field study*. A Laboratory study is a research investigation conducted in a controlled setting designed to held events constant. A laboratory may be a room or building designed for research. In contrast, field study

is a research investigation carried out in a naturally occurring setting. Research conducted on a street corner, or in a classroom are examples of field studies.

The final key to the successful design of an experiment involves *the random assignment* of subjects to treatment or experimental and control groups. According to the random assignment, all participants in the experiment have an equal chance of being exposed to each level of the IV. Random assignment helps to avoid confounding results due to the effect of *intervening variables*. (Confounding refers to instances in which factors other than the DV are allowed to vary). If this occurs, a researcher cannot determine whether changes in the DV are due to the manipulation of the IV or to the other confounding factors. For example, if in one condition of an experiment, all the subjects were highly intelligent, and the other condition all the subjects were not much intelligent, we would say that confounding has occurred. We would not be able to separate the effects of subject intelligence from the effects due to the experimental manipulations. Consequently, random assignment helps ensure that any potential confounding factors are distributed equally across the various experimental conditions, allowing researchers to interpret results with more certainty.

The last step in experiment is to analyze the results statistically by comparing the differences between conditions.

STEPS IN EXPERIMENTAL METHOD



Limitations of Experimental Method

1. Experimental method demands a completely controlled situation to study behavior. Hence, this method fails to study behavior in naturalistic conditions.
2. It is quite difficult to know and control all of the intervening variables. Similarly, we cannot always possible to control the IV completely.
3. In experimental method, we often make use of animals or birds as subjects for the experimentation. It is also debatable whether experimental results obtained from such sources are applicable to human beings or not.
4. Experimental method has a limited scope. All problems of psychology cannot be studied by this method.
5. Experimental method is costly and time-consuming method.

6. The dynamic nature of human behavior does not always allow the IV leading to the change in the DV. So it is impossible to get the uniform changes in the DVs on account of the concomitant changes in the independent variable.

ETHICAL ISSUES IN PSYCHOLOGICAL RESEARCH

Ethics are very important when carrying out any type of research. Ethics refers to the correct rules of conduct necessary when carrying out research.

All psychological research conducted today is performed in accordance with ethical principles acceptable both to society and to science. The American Psychological Association (APA) and The British Psychological Society (BPS) have issued a code of ethics in psychology that provides guidelines for the conduct of research. These standards guarantee the safety, privacy, and well-being of all research participants including humans and animals and are strictly enforced in Universities and other organizations by special review panels called Institutional Review Boards. These boards review all proposed research projects, and such projects can proceed only when final approval is granted.

Some of the key guidelines in research ethics are:

1. A subject's participation in research should be voluntary and based on informed consent. *Informed consent* means before agreeing to participate in the study, subjects must be provided with information about:
    a. The study's purpose and procedures
    b. The study's potential benefits
    c. Potential risks to participants
    d. The right to decline participation and withdraw at any time without penalty
    e. Whether responses will be confidential.

2. Subjects should not be exposed to harmful or dangerous research procedures. This guideline is intended to protect subjects from psychological as well as physical harm. Thus even stressful procedures that might cause emotional discomfort are largely prohibited. However, procedures that carry a moderate mental discomfort may be acceptable.
3. If an investigation requires some *deception* (Deception means withholding information about a study from research participants or, in some cases, giving false information about it.) of subjects, the researcher is required to explain and correct any misunderstandings as soon as possible. The deception must be disclosed to subjects in debriefing sessions without compromising the goals of the study. **Debriefing** means after the study is over, participants must be given a general idea of what the researcher was investigating and why, and their part in the research should be explained.
4. Subject's rights to privacy should never be violated. Information about a subject that might be acquired during a study must be treated as highly confidential and should never be made available to others without the consent of the participant.
5. While animals are used in research, they must be treated humanely. Any harmful or painful procedures imposed upon animals must be thoroughly justified in terms of the knowledge to be gained from the study. Furthermore, laboratory animals are entitled to decent living conditions such as housing, cleaning, feeding etc.
6. Prior to conducting studies, approval should be obtained from host institutions and their research review committee. Research results should be reported fully and accurately, and raw data should be promptly shared with other professionals who seek to verify substantive claims.

++ ++ ++ ++ ++