

NCERT SOLUTIONS

CLASS - 11th



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Subject : Psychology

Chapter : 2

Chapter Name : Methods of enquiry in psychology

Q1 What are the goals of scientific enquiry?

Answer. There are diverse kinds of research works and/or studies that are undertaken by psychologists. However, it is seen that usually they share some common goals of enquiry. These are:

Description: As is obvious, it is very important to describe a particular phenomena and distinguish the described phenomena from others of the kind. Description is a very important step as any event or phenomena that is to be described, may have many aspects, which need to have their own explanations and descriptions. For example, the idea of entertainment has various meanings for everyone which may vary from reading books to going to the movies.

Prediction, literally meaning forecasting of events. This is mainly used to establish a relationship between two variables.

Explanation: Knowing the cause or the reason behind a certain behaviour is important and this need is fulfilled by 'explaining' the behaviour. It also tries to understand the conditions under which a particular behaviour may occur.

Sometimes it's important to have control. Control actually means creating changes in the phenomenon or behaviour. It may be referred to making a behaviour occur, and sometimes changing it, whether enhancing it or reducing it and its effectiveness.

Application: Research related to psychology are conducted at various levels, mainly to solve the range of problems faced by the society. Psychology helps in solving problems, which may be at the individual, organizational or community level.

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Q2 Describe the various steps involved in conducting a scientific enquiry.

Answer. The various steps involved in conducting a scientific enquiry, begin with conceptualising a problem. A theme, topic for study is selected and the questions or problems which would be answered during the study are made. Problems or questions may be based on the materials acquired from the past researchers and/or personal experiences. Through these studies and observation, a relationship between different variables is indicated. Hence, for collecting the data, developing a certain design for research of the entire study is very important. Participants of the study are selected. Some studies may require the selection of some special

kind of participants, for example a child specific study will have children as participants. There are factors to be taken into account for this selection, for example, nature of study. There are also various methods by which data can be collected, these are observation, experimental, correlational method. Hence, keeping in mind the kind and nature of study is very important while choosing which data collection method to be applied. The next step includes the decision to be taken as to what tools are to be used, like interview schedule, questionnaire, survey, among others. At last, a graphical representation of data can be made using, bar diagram, pie chart, histogram, mean, median, mode and standard deviation, all this is done to analyse the collected data of the study. The study actually includes an assumed hypothesis. Then researcher then sees if the conclusions support this hypothesis or not.

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Q3 Explain the nature of psychological data.

Answer. The following are you the types of psychological data:

1. Demographic information includes personal information of a particular individual. These include the name, age, gender, education, marital status, residence, caste, religion, income, etc. of a particular person.
2. Physical information includes information related to the ecological conditions, i.e, the physical surroundings of a person. This can be information about economy, housing conditions, facilities at the home, in the school, transportation, among others.
3. Physiological data is related to the biological data of a particular person. This may include data like height, weight, heart rate, level of fatigue, EEG, sleep schedule etc of a person. This can also relate to the biological functioning of an animal.
4. Psychological information, as the name suggests, pertains to the psychological functioning of an individual.

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Q4 How do experimental and control groups differ? Explain with the help of an example.

Answer. Experimental group: In this kind of a group, there is an independent variable. This variable is the one that is manipulated in order to see its effects on other variables, which may or may not be related. Hence, subjects in this group may receive some special treatment in regard to the independent variable.

Control Group: This can be best described as a comparison group. There is no major independent variable to be administered in this group. The whole purpose of creating such a group is to see and compare the results when the independent variable is applied to the experimental group.

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Q5 A researcher is studying the relationship between speed of cycling and the presence of people. Formulate a relevant hypothesis and identify the independent and dependent of people.

Answer. A variable can be simply defined as any stimulus and/or event which varies. A variable is something that can be measured, e.g. height.

A hypothesis statement which is testable and it tends to express the relation between two or more than two variables.

Independent variable is a variable which can be and is very readily manipulated during an experiment or study is systematically manipulated or altered in an experiment.

Dependent variable is the one that is measured after the experiment is done.

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Q6 Discuss the strengths and weaknesses of experimental method as a method of enquiry. enquiry.

Answer. The main aim of the experimental method is to discover the relationship between a range of factors. This can be done by manipulating the situations under which the experiments are performed. The manipulation is done under totally controlled circumstances.

Characteristics:

As in any other scientific study, the study of psychological experimentation involves manipulating a range of variables and then studying the effects of such manipulation on other various aspects. This manipulation is set in a totally controlled condition. Subjects or individuals to the study are randomly assigned to experimental and control groups.

Advantages:

A cause-effect relationship is bound to be established between the variables, using the experimental method. Also, this enables the verification of the obtained result.

Limitations:

The environmental setting of conducting experiments is not at all natural. Therefore , the results obtained from a study conducted under this method cannot be generalised and may also lack external validity.

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Q7 Dr. Krishnan is going to observe and record children's play behaviour at a nursery school without attempting to influence or control the behaviour. Which method of research is involved?

Answer. The method that can come to the best use of Dr. Krishnan would be the non-participant observation. To observe and record a child's behaviour at play, without controlling or manipulating any factors and doing so in a natural environment, this method comes in handy. To do this, he can sit in a corner and attempt to observe the children's behaviour without the children being aware of it and hence it can be an observation in a natural setting. He can then collect all of his observations in the form of data in a file and then draw out conclusions. These conclusions can then be compared to the assumed hypothesis.

Merits:

A researcher in this method, observes the behaviour, body language of people in their own naturalistic settings. This enables an observer to get a first hand information regarding the subject.

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Q8 Give two examples of situations where survey method can be used. What are the limitations of this method?

Answer. Surveys are useful in a variety of situations. The most common example is of surveys being used in the political regime, to know people's satisfaction or dissatisfaction with any particular policy which may have been started by the government. The most common use of surveys comes in handy during the election periods to know who people vote for.

Surveys are widely used to test hypotheses relating to the relationship among variables, for example, checking the effects of some external factors on human behaviour. Surveys are especially conducting before launching a particular product in the market. However, the major difficulty still remains as the respondents tend to create a favourable impression during the survey, and might answer the questions dishonestly. It makes the respondents conscious about their responses and the impression the responses would form on others. A phenomena known as the surveyor's bias also affects the results, for example, the person conducting the survey may ask the questions in such a way as to elicit what s/he may think are the desired response to a particular question. It may also be noted that the information collected through surveys remains at the surface and does not penetrate into the depth of the given problem. They are also expensive to conduct and require a lot of time on the participants' and surveyors' part.

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Q9 Differentiate between interview and questionnaire.

Answer. An interview with people, can be described as a face to face interaction between two or more people. Interviews can be of two types, structured and unstructured. Interview is a very personal method of digging up information about anything. It is mostly used to get to know people. Interviews are very flexible, questions can be added or altered as per convenience. How the information is retrieved, it all depends on the interviewer as only they can dig deeper by posing counter question and by noticing non-verbal clues. Therefore, a very highly skilled person is required to pose as an interviewer.

Questionnaire, on the other hand, consists of a form that has a series of questions to be answered by the respondents. They are always structured. However, unlike the interview method where the interviewer attempts to know more about the respondents, other than what is verbally being said, here it is not possible to know anything more than whatever is asked in the questionnaire. Needless to say that they are not subjective.

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Q10 Explain the characteristics of a standardised test.

Answer. There are many advantages for choosing a standardised test. These tests are considered to be reliable and here reliability refers to the consistency of scores that are obtained by the participants on the same test at different times. This means that after conducting such tests, there is no variation in the scores obtained by the participants on different occasions. Validity: This refers to the fact that the given test actually tests the things it is made for. A test can only be used if it is valid in this sense.

Norms: These can be best described as the normal average performance of the group and a test only becomes standardised if norms are developed for it.

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Q11 Describe the limitations of psychological enquiry.

Answer. Like other physical sciences, psychology doesn't have a zero point, which makes it even more difficult to have proper psychological measurements. The measurements are very relative in nature, hence, they cannot be universally generalised or applied. It can be seen as the case in various scenarios, for example, while developing questionnaires, the tools which are developed in urban context can not be applied in rural areas. Another major problem is that the psychologists are dependent on tools which have origins in the west, but they cannot be used universally.

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Q12 What are the ethical guidelines that a psychologist needs to follow while conducting a psychological enquiry?

Answer. Voluntary participation, as the name suggests, means that participants freely choose whether they want to participate in the study or not. Use of coercion or any other form of pressure which forces any person to participate in an experiment should not be used. Participants should, at all times, have the right to withdraw from study.

In a study, the people who are participating should be informed, i.e, they should understand what kind of treatment and experiments they might undergo during study. The participants should be provided with all the information that they might ask for or all the information that the conductor wants the participants to know. It should be provided to the participants before the study/research starts.

In some cases, due to the nature of the study, it becomes impossible to give away all of the information to the participants, this is known as deception. Hence, after the experiment is completed, it becomes necessary to give complete information to the participants to enable them to understand the whole purpose of the research.

The researchers are obligated to share the results of the study to the participants.

It is necessary to have a confidentiality of data sources. This is in accordance with every participant having a right to privacy. This can be done only by protecting the information given by the participants strictly confidential. In addition to this, the information provided by the participants should be used for research purposes only and should not be misused. For the purpose of confidentiality, sometimes, identities are not recorded. However, where it becomes absolutely necessary to record and keep identities, codes are used.

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