

Research Methods in psychology:

How psychologists answer questions about behaviour?

→ primarily, through the use of three basic procedures:

01. Observation

02. Correlation

03. Experimentation.

OBSERVATION: Describing the world around us.

→ Observation is different from informal inquiry in a sense that it is accompanied by careful, accurate measurement.

Systematic Observation: A basic method of science in which the natural world, or various events or processes in it, are observed and measured in a very careful manner.

Naturalistic Observation: Observing behaviour where it normally occurs.

→ A research method in which behaviour is studied in the settings where it usually occurs.

→ While naturalistic observation is often used in the study of animal behaviour, it is sometimes applied to human beings as well - especially to behaviour in public places such as airports, shopping malls, and hotel lobbies.

CASE STUDIES: Generalizing from the Unique.

→ A research method in which detailed information is gathered on specific individuals. The researchers then use this information to formulate principles or reach conclusions that, presumably, apply to large numbers of persons - perhaps to all human beings.

→ A research method in which detailed information about individuals

is used to develop general principles about behaviour.

→ Sigmund Freud used a small number of cases as the basis for his famous theories of personality and mental illness.

→ When the behaviour involved is very unusual, the case method can be quite revealing and useful.

→ Several unique cases have added to our understanding of the biological bases of memory. These cases involve individuals who experienced specific kinds of damage to the brain and, as a result, showed certain kinds of memory loss. By studying the pattern of such losses, psychologists have been able to piece together a more complete picture of how memories are stored in the brain.

⇒ Drawbacks :-

1. If the persons studied are unique, it can be misleading to generalize from them to other human beings.
2. Because researchers using the case method often have repeated contact with the individuals they study, there is the real risk that they will become emotionally involved with these persons and so lose their scientific objectivity, at least to a degree.

Survey Method : The science of Self-Report.

→ A research method in which large numbers of people answer questions about aspects of their opinion or their behaviour.

→ Instead of focusing in detail on a small number of persons, researchers obtain a very limited sample of behaviour from large numbers of individuals, usually through their responses to questionnaires.

⇒ Advantages: 1. Information can be gathered quickly and efficiently from many thousands of persons.

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2. Since surveys can be constructed quickly, public opinion on new issues can be obtained almost as soon as the issue arises.

Sampling - In the survey method, the methods used to select persons who respond to survey.

→ The survey method can be a useful approach for studying some aspects of human behaviour, but the results obtained are accurate only to the extent that issues relating to sampling and wording are carefully addressed.

CORRELATION : The search for relationships.

→ A research method in which researchers attempt to determine whether, and to what extent, different variables are related to each other.

→ From the point of view of science, the existence of a correlation between two variables can be very useful. This is so because when a correlation exists, it is possible to predict one variable from information about one or more other variables.

→ The ability to make such predictions is one important goal of science, and psychologists often attempt to make predictions about human behaviour.

⇒ Correlation involves making careful observations of each variable and then performing statistical analyses to determine whether and to what extent the variables are correlated - to what extent changes in one are related to changes in the other.

⇒ Correlations range from -1.00 to $+1.00$, and the more they depart from zero, the stronger the correlation.

⇒ Positive correlations indicate that as one variable increases, the other increases too.

Negative correlations indicate that as one variable increases, the other decreases.

⇒ Correlational research does not, by itself, provide strong or direct evidence about cause and effect relationships. This is one of the major drawbacks of such research.

⇒ Correlation research cannot answer the question "why?".

⇒ The fact that two variables are strongly correlated does not guarantee that they are causally linked - that changes in one cause changes in the other.

THE EXPERIMENTAL METHOD: KNOWLEDGE THROUGH SYSTEMATIC INTERVENTION.

A research method in which researchers systematically alter one or more variables in order to determine whether such changes influence some aspect of behaviour.

⇒ The experimental method in psychology involves two key steps: 1) The presence or strength of some variable believed to affect behaviour is systematically altered, and 2) the effects of such variations / alterations are carefully measured.

The logic: is if the variable that is systematically changed does indeed influence some aspect of behaviour, then individuals exposed to different levels or amounts of that factor should differ in their behaviour.

Independent ~~seba~~ variable: The factor systematically varied by the researcher is termed the independent variable.

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Dependent variable: The aspect of behaviour studied in an experiment is termed the dependent variable.

→ The variable that is measured in an experiment.

Random assignments of participants to experimental conditions.

Ensuring that all research participants have an equal chance of being exposed to each level of the independent variable (that is, of being assigned to each experimental condition).

Confounding (of variables)

→ Confusion that occurs when factors other than the independent variable are permitted to vary across experimental conditions: can invalidate the apparent results of an experiment.

→ It becomes essential for successful experimentation that to as great a degree as possible, all factors other than the independent variable that might also affect participants' behaviour must be held constant.

Experimenter effects: Unintended effects, caused by researchers, on participants' behaviour.

Double blind procedure: procedure in which the researchers who have contact with participants do not know the hypothesis under investigation.

It helps in reducing experimenter effects.