Methods Of Enquiry In Psychology

• A Psychological research is conducted for the purpose of description, prediction, explanation, control of behaviour and application of knowledge generated in an objective manner.

• Scientific research involves the following steps: conceptualising a problem, collection of data, analysing data, drawing and revising research conclusions.

• The Psychological research is also conducted to explain and understand subjective meaning of events as they occur in a particular context and also manifest one's own behaviour and experiences.

• Psychological research use different types of data including demographic, environmental, physical, physiological and psychological information are gathered. In Psychological study the data is located in a context and linked to the theory and methods used for its collection.

• Psychologists use three general methods. One is natural observation, which is made as systematic as possible by the development of psychological tests. Another is the experimental method in which independent variables are manipulated and dependent variables are measured. The third is statistical methods to test the significance of differences obtained and to compute correlations between variables.

• The general scientific method involves careful observation, forming hypotheses, and testing hypotheses against empirical facts.

• Psychologists use three major scientific methods: descriptive methods, correlational methods, and formal experiments.

1. Descriptive methods include the use of surveys, naturalistic observation, and clinical methods to describe behaviour and mental processes; these help us to reach the goal of description.

2. Correlational methods are used to study the relationships between variables; these help us to reach the goal of prediction.

3. Formal experiments can be used to reach conclusions about cause-and-effect relationships between variables; these help us to reach the goals of understanding and influencing behaviour.

• Different methods are used for the collection of information, e.g., observation, experiment, correlational research, survey research, case study etc.

• Observation method refers to employing systematic, organised and objective procedures to record behavioural phenomena occurring naturally in real time. It may be naturalistic vs controlled and participant vas non-participant.

• The experimental method helps in establishing cause-effect relationship. Experiment refers to a series of observations conducted under controlled conditions to investigate the causal relationship between selected variables. It involves the manipulation of an independent variable in order to see its effect on a dependent variable. There are three types of experiments: the laboratory experiment, the field experiment and the natural experiment/quasi experiment.

• In most of the Psychological measurement the individual differences in one ability are often related to individual differences in other abilities. Correlational research indicates a relationship between two variables. The correlation between two variables may range from +1.00 through 0.0 to -1.00. The coefficient of correlation is of three types: positive, negative and zero. Correlation simply provide a numerical value of relationship, it never explains the cause of relationship.

• The focus of survey research and interviews is to inform about the existing reality. The investigator make use of questionnaire, interviews and ratings to obtain information about a particular area.

• Surveys are generally remote, in that respondants do not have an interviewer present, whereas interviews involve face to face interaction. The questionnaire is very common, simple, versatile and low cost self report method of collecting data. Surveys are also conducted through telephonic survey.

• Psychological tests have been devised and are primarily used for the determination and analysis of individual differences in general intelligence, differential aptitudes, educational achievement, vocational fitness, personality, social attitudes and non intellectual characteristics.

• A Psychological test is a standardised and objective tool which is used to assess an individual’s abilities and personality characteristics in relation to others. A good psychological test should have high reliability, high validity and representative norms. Psychological tests can be categorised on language basis as Verbal, Non Verbal and Performance tests. On the basis of administration Psychological tests are divided into individual and group tests. These tests can also be classified as speed or power tests.

• Case study is another important technique to understand human behaviour. It is an attempt to explore, in some considerable depth, the behaviour and experiences of an individual. These are based on data generated by different methods e.g., Interview, Observation, Questionnaire and Psychological tests. Case studies are developed of individuals, organisations, small group of individuals, institutions and specific events.

• In Psychological researches the data may be analysed through qualitative as well as quantitative methods.

• Lack of absolute zero, relative nature of Psychological tools and subjective interpretation of qualitative data are some of the limitations of Psychological inquiry.

• Ethical principles of voluntary participation of the subjects, their informed consent, and sharing of results with the participants must be followed by a researcher.

• , Experiments usually involve at least one experimental group (which receives the

independent variable) and a control group.

• Differences between the groups in the dependent variable can be said to be caused by the independent variable.

• Ethical research carefully protects the rights of participants. Research using humans is considered to be ethical when the following conditions are met.

1. Individuals are asked to participate without coercion (force).

2. Individuals are informed about the nature of the experiment before giving consent to participate.

3. Unnecessary deception of participants is avoided and carefully regulated when required.

4. The nature of the study is fully explained to the participant after the study is over.

5. All information learned about the participant is kept confidential.

• Statistics is that branch of mathematics which deals with numerical data. It deals with description, summarising and representation of data. The inferential statistics helps to draw conclusions from data. Psychologists use four levels of scales:

Nominal, Ordinal, Interval, and Ratio. Nominal scale is at the lowest level and ratio the highest.

• The bar diagram represents distribution of categorical data, qualitative categories on a nominal or ordinal scale of measurement. If the data are on a nominal scale the categories to be represented by the bars on the x-axis could be in any meaningful order.

• Frequency Polygon is a line figure which is used to represent data from a frequency distribution. It is a series of connected points above the midpoint of each class interval.

• Histogram is a bar graph that presents data from frequency distribution. Histogram as well as polygon are made when data are either on interval or ratio scale.

• A measure of central tendency helps to simplify comparison of two or more groups. There are three commonly used measures of central tendency: Arithmetic Mean, Median and Mode.

• The arithmetic mean is the sum of all the scores in a distribution divided by the total number of scores.

• The median is the score value that divides the distribution into halves. It is such a value that half of the scores in the distribution fall below it and half of them fall above it.

• The mode is the score value with the highest frequency. In an ungrouped data the mode is that single score which occurs in a distribution of scores most frequently.

Words That Matter

1. Case study: A technique in which one person, event or organisation is studied in depth.

2. Confidentiality: Researchers are responsible for keeping all of the data they collect completely anonymous.

3. Control group: Subjects in a study who do not receive the special treatment given to the experimental group.

4. Correlational research: Research with the goal of describing the strength of the relationship between two or more events or characteristics or variables.

5. Data: Qualitative and quantitative information related to mental processes and behaviour, gathered from individuals.

6. Debriefing: The procedure for informing a participant of the actual intent of an experiment after its successful completion. It is specially required if the participant was seriously misled during the conduct of the experiment.

7. Dependent variable: The factor that is measured in an experiment; it changes because of the manipulation of the independent variable.

8. Experimental group: The subjects in study who receive some special treatment in regard to the independent variable.

9. Experiment: A series of observations conducted under controlled conditions to investigate the causal relationship between selected variable.

10. Group test: A test administered to several people at one time by a single tester.

11. Hypothesis: A tentative statement of the relationship between variables as answer to the research questions.

12. Enculturation: All learning that takes place without direct, deliberate teaching.

13. Independent variable: The event or situation manipulated by an experimenter to see if it will have a predicted effect on some other event or situation.

14. Individual test: A test which Can be administered to only one person at a time. The Standford-Binet and the Wechsler intelligence tests are examples of individual tests.

15. Interview: A face-to face dialogue for the purpose of obtaining information, establishing a diagnosis, assessing interpersonal behaviour and personality characteristics, or counseling the individual.

16. Negative correlation: Relationship between two variables in which as one variable goes up, the other goes down.

17. Norm: Standard or “value or criteria, based on measurements of a large group of people used in interpreting scores on psychological tests; in social psychology, the group standard for approved behaviour.

18. Objectivity: If two or more persons independently study a particular event, both of

them, to a great extent, should arrive at the same conclusion. .

19. Observation: The intentional examination and recording of an object or process as it occurs.

20. Performance tests: Tests that do not involve language.

21. Psychological test: A standardised and objective tool to assess psychology attributes of a Sample of a person’s behaviour.

22. Positive correlation: Two or more than two variables have some common features.

23. Qualitative method: Psychologists use method in which data is interpreted in terms of narrative analysis generally in descriptive forms like field notes, photographs, etc. Information is not available in form of scores.

24. Quantitative method: Responses and analysis of the data is based on statistical calculations in terms of scores or in scaled form. Scores are expressed in the strength and magnitude of the response.

25. Questionnaire: Set of questions. Most common, simple, versatile and low-cost self-report method of collecting information.

26. Reliability: A statement about the degree of consistency of a measurement technique. Reliable techniques yield similar measure upon repeated measurement under similar conditions.

27. Speed Test: A test which evaluates the individual on the basis of time taken to answer the items accurately.

28. Power Test: Test which assess the underlying ability of the individuals by allowing them sufficient time.

29. Survey: A research method utilising written questionnaires or personal interviews to obtain data of a given population.

30. Validity: The ability of a test to measure what it was designed to measure.

31. Variable: Any measurable conditions, events, characteristics, or behaviours that are controlled or observed in a study.