Research methods in psychology

introduction :

Science is an organized body of knowledge in a specific field or a set of laws that explain phenomena in a specific field. The scientific method is the path that leads to revealing facts in the various sciences. Science is concerned with formulating laws in a specific field. These laws explain the phenomena of this field. The method is the method by which you arrive at these laws.

The method means systematic steps taken by the researcher to address one or more issues and follow them to reach an achieved result that can be used. Research methods in psychology have varied according to the types of phenomena being studied, and according to the researcher's specialty and the school to which he belongs.

1- Descriptive method:

Descriptive research methods are scientific tools used by researchers and psychologists for gathering information and describing the specifics of behaviors, patterns, and other phenomena. These methods focus on the who, what, and where, versus the why or how.

In psychology, descriptive research is used often to define certain behaviors or traits that are observed. Because descriptive research is typically concerned with the "raw truth," it is often conducted as naturally as possible without introducing any manipulation or variables.

Descriptive research does not typically rely on a hypothesis and may be more flexible than the other types of psychological research. This type of research can act as a springboard for further exploration by allowing scientists to gather

information needed to form a hypothesis. That hypothesis could then serve as the basis for a correlational study or a formal experiment.

There are three methods scientists use to obtain descriptive research:

- observation
- case studies
- surveys

Each method comes with strengths and weaknesses. Scientists may opt for one method over another depending on the type of information they need and from whom.

2- Comparative method:

Comparative research has taught us much about the evolution and development of human and animal behavior. Humans share not just physical and biological similarities with other species, but also many behavioral traits and, in some of these cases, the psychological mechanisms behind them. Comparing behavior and cognition across multiple species can help scientists to pinpoint why and when in phylogenetic history a behavior may have evolved, how it evolved, and what the mechanisms behind it are (Tinbergen, 1963). While the comparative approach has proven quite effective in addressing these questions, comparing behavior across multiple species is not as easy and straightforward as it may initially seem. Rigorous methodology and careful interpretation of results is crucial to answering any of these questions definitively. The focus of the current article is on the comparative methodology and the important factors that need to be addressed in order for comparative research to be effective. We first discuss the benefits and importance of comparative research, followed by the challenges that need to be overcome in good comparative work. We then discuss

experimental economics as one “model system” for comparative work that has proven particularly good at addressing such issues, and comment on other approaches. We conclude with future directions for comparative research with an eye on important methodological and theoretical considerations.

A key challenge to comparative research is making sure that any differences (or similarities) discovered reflect true species differences (or similarities), rather than differences in the procedures. This requires that we use, to the degree possible, identical procedures across the species tested. In an ideal situation, you design a paradigm that can be conducted identically across all of the species in question. You would also assume that the different species all interpreted your identical procedure in the same way. If each step is identical, then you could, in this ideal world, assume that any similarities and differences are truly reflective of similarities and differences among the species tested.

3- Experimental method:

The experimental method involves manipulating one variable to determine if this causes changes in another variable. This method relies on controlled research methods and random assignment of study subjects to test a hypothesis.

For example, researchers may want to learn how different visual patterns may impact our perception. Or they might wonder whether certain actions can improve memory. Experiments are conducted on many behavioral topics, some of which include attention, cognition, emotion, memory, perception, and sensation.2

The scientific method forms the basis of the experimental method.3 This is a process used to determine the relationship between two variables—in this case, to explain human behavior.

Positivism is also important in the experimental method. It refers to factual knowledge that is obtained through observation, which is considered to be trustworthy.

When using the experimental method, researchers first identify and define key variables. Then they formulate a hypothesis, manipulate the variables, and collect data on the results. Unrelated or irrelevant variables are carefully controlled to minimize the potential impact on the experiment outcome.

To understand how the experimental method works, it is important to know some key terms.

- Dependent variable: The dependent variable is the effect that the experimenter is measuring. If a researcher was investigating how sleep influences test scores, for example, the test scores would be the dependent variable.
- Independent variable: The independent variable is the variable that the experimenter manipulates. In the previous example, the amount of sleep an individual gets would be the independent variable.
- Hypothesis: A hypothesis is a tentative statement or a guess about the possible relationship between two or more variables. In looking at how sleep influences test scores, the researcher might hypothesize that people who get more sleep will perform better on a math test the following day. The purpose of the experiment, then, is to either support or reject this hypothesis.

Psychologists, like other scientists, use the scientific method when conducting an experiment. The scientific method is a set of procedures and principles that guide how scientists develop research questions, collect data, and come to conclusions.

The five basic steps of the experimental process are:1

1. Identifying a problem to study
2. Devising the research protocol
3. Conducting the experiment
4. Analyzing the data collected
5. Sharing the findings (usually in writing or via presentation)

Most psychology students are expected to use the experimental method at some point in their academic careers. Learning how to conduct an experiment is important to understanding how psychologists prove and disprove theories in this field.

4- Clinical method:

The clinical method in psychology represents the fundamental tool and protocol to be utilized in the therapeutic context in order to obtain the information and other aspects necessary in individuals' treatment. It seems that this clinical method is not only used in psychology but other health sciences.

The clinical method in psychology can be defined as a conjunction of procedures used in this discipline to understand the possible causes of the...

See full answer below.

This method began to be used to study and diagnose mental disorders and diseases, manifestations of deviation, and prescribe treatment for them. This approach has become a good method for psychological research to study the nature of behavior and personality and its conflicts and to try to understand the conflict, its factors and the reasons behind it.

The clinical method uses the following tools:

A- **Interview**: It is a dialogue and conversation between the researcher (examiner) and the subject, in which the researcher asks specific questions to collect data about the topic he is researching.

B- **Observation**: It is an important means of collecting data. Observation is characterized by the fact that it is useful in collecting data related to the behavior of the individual being investigated.

T- **Psychological tests and measures**: These are among the tools to measure basic personality, examples of which include: intelligence tests and projective tests.

A - **Case study and questionnaire**: Study of abnormal behavior and abnormal personality, as it is useful in knowing its causes and ways to treat it