

NEEDS AND FUNCTIONS OF HYPOTHESIS

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NEED AND FUNCTIONS OF HYPOTHESIS

Hypotheses bring clarity, specificity, and focus to a research problem. It is not essential for a study and one can conduct a valid investigation without constructing a formal hypothesis. On the other hand, within the context of a research study, we can construct as many hypotheses as we consider to be appropriate. Hypotheses primarily arise from a set of 'hunches' that are tested through a study and one can conduct a perfectly valid study without having these hunches or speculations. Hypotheses are based upon similar logic. As a researcher, we do not know about a phenomenon, a situation, the prevalence of a condition in a population, or the outcome of a program, but we do have a hunch to form the basis of certain assumptions or guesses. We test these, mostly one by one, by collecting information that will enable us to conclude if our hunch was right. The verification process can have one of three outcomes. Our hunch may prove to be: right, partially right, or wrong. Without this process of verification, we cannot conclude anything about the validity of our assumption. In the rest of the article, we are going to present to you definitions, functions, characteristics, types, errors & the process of testing a hypothesis, and hypotheses in qualitative research.

Definitions of Hypothesis

A hypothesis is a hunch, assumption, suspicion, assertion, or an idea about a phenomenon, relationship, or situation, the reality or truth of which we do not know.

Black and Champion define a hypothesis as “a tentative statement about something, the validity of which is usually unknown”

Functions of a Hypothesis

A hypothesis is important in terms of bringing clarity to the research problem. Specifically, a hypothesis serves the following functions:

- A hypothesis provides a study with focus. It tells us what specific aspects of a research problem to investigate.
- It tells us what data to collect and what not to collect, thereby providing focus to the study.
- As it provides a focus, the construction of a hypothesis enhances objectivity.
- A hypothesis may enable us to add to the formulation of the theory. It enables us to conclude specifically what is true or what is false.

Theories are relatively elaborate tools used to explain and predict events. The social scientist develops a theory to account for some social phenomena, and then he

devises a means whereby the theory can be tested or subjected to verification or refutation. Seldom does the researcher test theory directly. Most of the time he/she conducts tests of hypotheses that been generated and derived from that theory.

If the hypotheses 'test out' as the researcher has specified, or if his empirical observations are in accordance with what has been stated in the hypotheses, we say that his/her theory is supported in part. It usually takes many tests of different hypotheses from the same theory to demonstrate its predictive value and its adequacy as a tool of explanation for some event or sequence of events.

A major function of hypotheses is to make it possible to test theories. In this regard, an alternative definition of a hypothesis is that it is a statement of theory in testable forms. All statements of theory in testable form are called hypotheses.

Some hypotheses are not associated with any particular theory. It could be that as a result of some hypothesis, a theory will be eventually constructed. Consequently, another function of hypotheses is to suggest theories that may account for some event.

Although it is more often the case that research proceeds from theories to hypotheses, occasionally the reverse is true. The social investigator may have some idea about why a given phenomenon occurs and he/she hypothesizes a number of things that relate to it.

He/she judges that some hypotheses have greater potential than others for explaining the event, and as a result, he/she may construct a logical system of propositions, assumptions and definitions linking his explanation to the events. In other words, the researcher devises a theory.

Working from the hypothesis back to the theory is not necessarily poor methodology. Eventually, the investigator is going to have to subject the resulting theory to empirical test to determine its adequacy. The predictive value of the theory can be assessed at that time.

Hypotheses also perform a descriptive function. Each time a hypothesis is tested empirically, that tells something about the phenomenon it is associated with. If the hypothesis is supported, then the information about the phenomenon increases.

Even if the hypothesis is refuted, the test tells something about the phenomenon that is not known before. The accumulation of information as a result of hypothesis testing reduces the amount of ignorance we may have about why a social event occurs in a given way.

Hypotheses also have some important secondary functions. As a result of testing certain hypotheses, social policy may be formulated in communities, penal institutions may be

redesigned and revamped, teaching methods may be altered or improved solutions to various kinds of social problems may be suggested and implemented, and supervisory practices may be changed in factories and business.

Testing hypotheses refute certain ‘common sense’ notions about human behaviour, raises questions about explanations we presently use to account for things, and most generally alters our orientation towards our environment to one degree or another. All hypotheses have to do with our knowledge of things, and as this knowledge changes, we change also.

FUNCTIONS OF HYPOTHESIS

1. Guiding Research
2. Productive Power
3. Testable and Measurement
4. Framework for Interpretation
5. Foundation for Experimentation
6. Aids Communication
7. Revision and Evaluation
8. Refinement of Focus.

Characteristics of a Hypothesis

There are a number of considerations to keep in mind when constructing a hypothesis. The wording of a hypothesis must have certain attributes that make it easier for us to ascertain its validity. These attributes are, A hypothesis should be simple, specific, and conceptually clear. There is no place for ambiguity in the construction of a hypothesis, as ambiguity will make the verification of a hypothesis almost impossible.

It should be 'undimensional' – that is, it should test only one relationship or hunch at a time.

To be able to develop a good hypothesis we must be familiar with the subject area.

The more insight we have into a problem, the easier it is to construct a hypothesis.

For example; the average age of the male students in this class is higher than that of the female students. The above hypothesis is clear, specific, and easy to test. It tells us what we are attempting to compare (average age of this class), which population groups are being compared (female and male students), and what we want to establish (higher average age of the male students).

