Hypothesis

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2.1 Meaning

Hypothesis refers to a predictive statement made by the researcher that is capable of being tested by various/any scientific method, which relates an independent variable to a dependent variable.

It can be understood as a proposition or a statement highlighting what researcher is looking for, which can be put to a test to determine its validity.

Example: Students who participate in moot competitions will show a greater confidence and research skills than students who do not participate in moot competitions.

2.2 Characteristics of Hypothesis

Some of the important characteristics of hypothesis are:

- A hypothesis must be clear and precise
- It must be capable of being tested
- It must have a limited scope and therefore must be specific
- Hypothesis must be consistent with the known facts
- It must be possible to test the hypothesis within a reasonable time as one cannot spend lifetime/excess/unreasonable time to collect data for testing hypothesis
- Hypothesis must be stated in most simple terms so that it is easily understood by all people concerned
- There must be stated relationship between variables
- Hypothesis must have a empirical reference and must explain what it intends to explain

2.3 Types of Hypothesis of Hypothesis

There are five major types of hypothesis:

Name	Explanation	Example
Simple Hypothesis	Represents a relationship between one dependent variable & one independent variable	Eating more vegetables helps in losing weight. Here eating more vegetables is an independent variable and losing weight is a dependent variable
Complex Hypothesis	• Shows relationship between two or more dependent variables and two or more independent variables. • Is termed as complex because of increase in the number of dependent and independent variables in the hypothesis	Eating more fruits and vegetables helps in losing weight and increasing the glow of skin and decreases risk of many diseases. Here Eating fruits and eating vegetables are two independent variables, whereas losing weight, skin glow and decease in risk of diseases are dependent variables are three dependent variables
Directional Hypothesis	• Shows how a researcher is rational and dedicated to a particular issue/result. • Is built upon a directional relationship between two variables and constructed upon an already existing theory	Students with more than three trial court internships have better litigation skills than children having less than 3 or no trail court internships
Non-Directional Hypothesis	• Involves an open ended hypothesis that predicts that independent variable will influence the dependent variable but the direction of the relationship between the variables is not defined or clear	There will be a difference in the performance of students with and without moot experience (Not clearing defining what kind of difference)
Null Hypothesis	• Is a negative statement which is contrary to hypothesis there is no relationship between independent & dependent variables	Death Penalty has no effect on the rate of crime (Null Hypothesis) Death Penalty helps in reducing rate of crime (Research question)

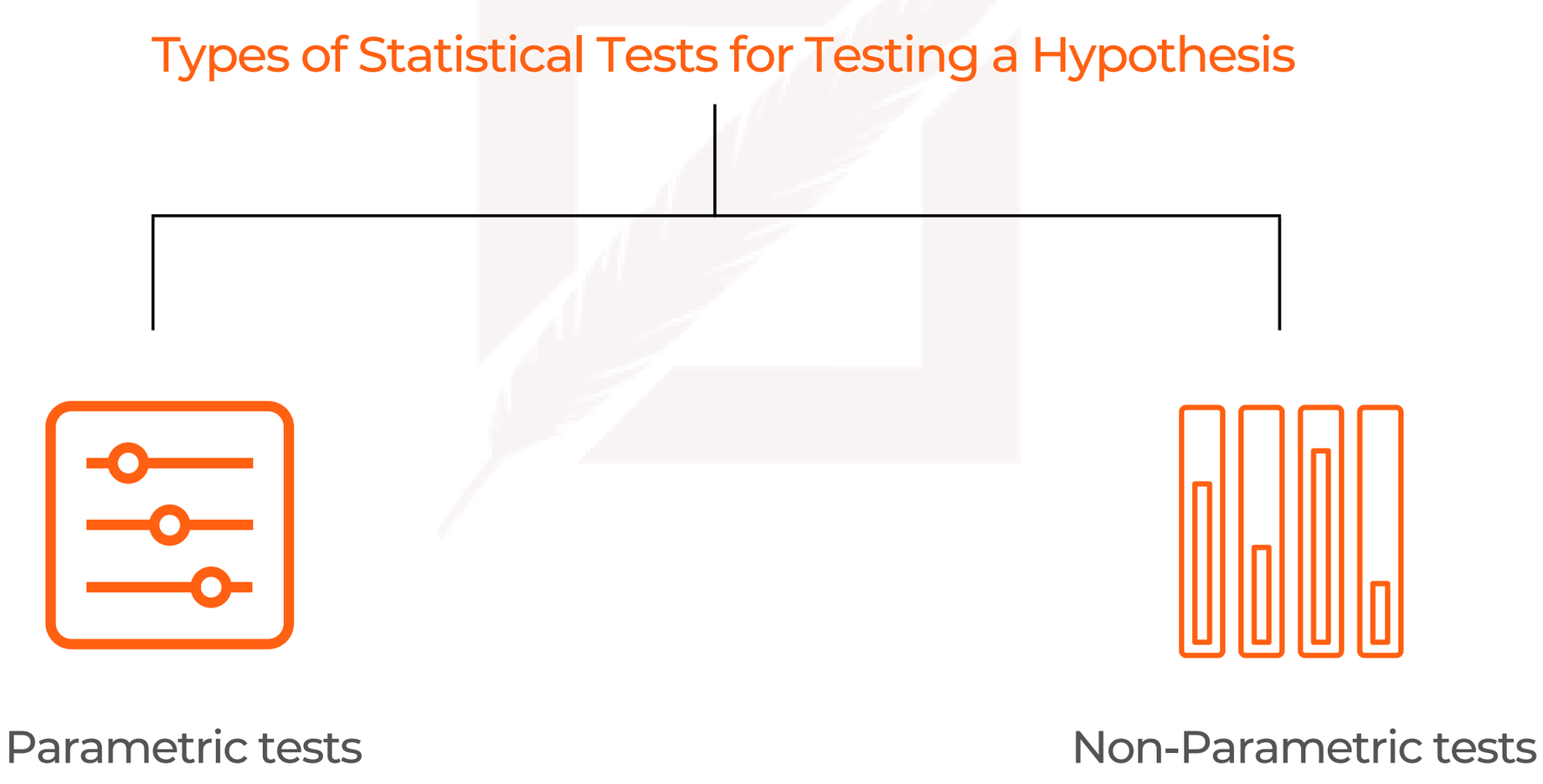
2.4 Functions of Hypothesis

Hypothesis is considered to be a vital aspect of a research; researcher use hypothesis to pen down their thoughts and plan as to how the research would be conducted. Some of the important functions of hypothesis are:

- It helps in making an observation/experiment/research possible
- It is often the starting point of research work
- It helps in verifying the observations/results of the research
- It helps in providing the correct direction to the research work

2.5 Testing of Hypothesis

Statistical tests are used to make generalization about the population from the samples collected; these tests are techniques that rely on probability distribution, to reach to a conclusion about the reasonableness of a hypothesis.



Parametric tests are the one in which specific assumptions are made about the population parameter. The principle behind these tests is that a fixed set of parameters is used to determine probabilistic model. To conduct these tests prior knowledge of population distribution is required.

Non-Parametric tests don't make any assumptions about the parameters for a given population being studied or used in the research. Hence these tests do not depend on the populations. These tests can be understood as statistical tests used in the case of non-metric independent variables.