

Meaning

❖ In ordinary context:

- Hypothesis means mere assumptions or supposition which are to be proved or disproved.

❖ In research context:

- Hypothesis is a formal question that is intended to resolve.

Definition

❖ Hypothesis may be defined as a proposition of a set of proposition set forth as an explanation for the occurrence of some specified group phenomenon either asserted merely as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts.

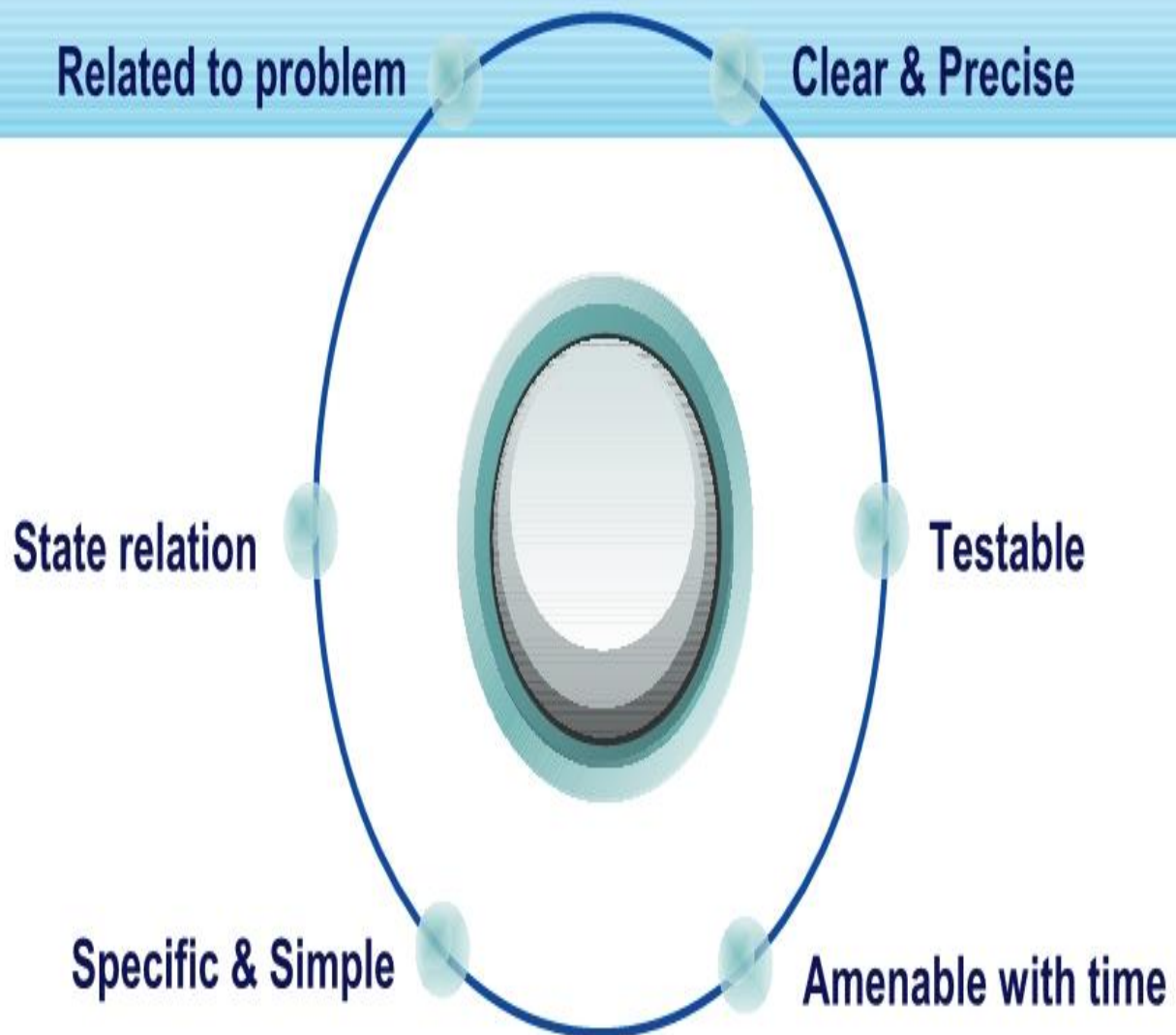
Hypothesis Defined

- ❖ An educated guess
- ❖ A tentative point of view
- ❖ A proposition not yet tested
- ❖ A preliminary explanation
- ❖ A preliminary Postulate

Definition by Various Authors

- ❖ “A hypothesis is a conjectural statement of the relation between two or more variables”. (Kerlinger, 1956)
- ❖ “Hypotheses are single tentative guesses, good hunches – assumed for use in devising theory or planning experiments intended to be given a direct experimental test when possible”. (Eric Rogers, 1966)
- ❖ “Hypothesis is a formal statement that presents the expected relationship between an independent and dependent variable.”(Creswell, 1994)

Characteristics



“If a prisoner learns a work skill while in jail, then he is less likely to commit a crime when he is released.”

Purpose

- ❖ Guides/gives direction to the study/investigation
- ❖ Defines Facts that are relevant and not relevant
- ❖ Suggests which form of research design is likely to be the most appropriate
- ❖ Provides a framework for organizing the conclusions of the findings
- ❖ Limits the research to specific area
- ❖ Offers explanations for the relationships between those variables that can be empirically tested

Components of Hypothesis

To be complete the hypothesis must include three components:



Variables



Population



Relation

“Increased faculty’s efficiency will improve students' result”

Hypothesis making

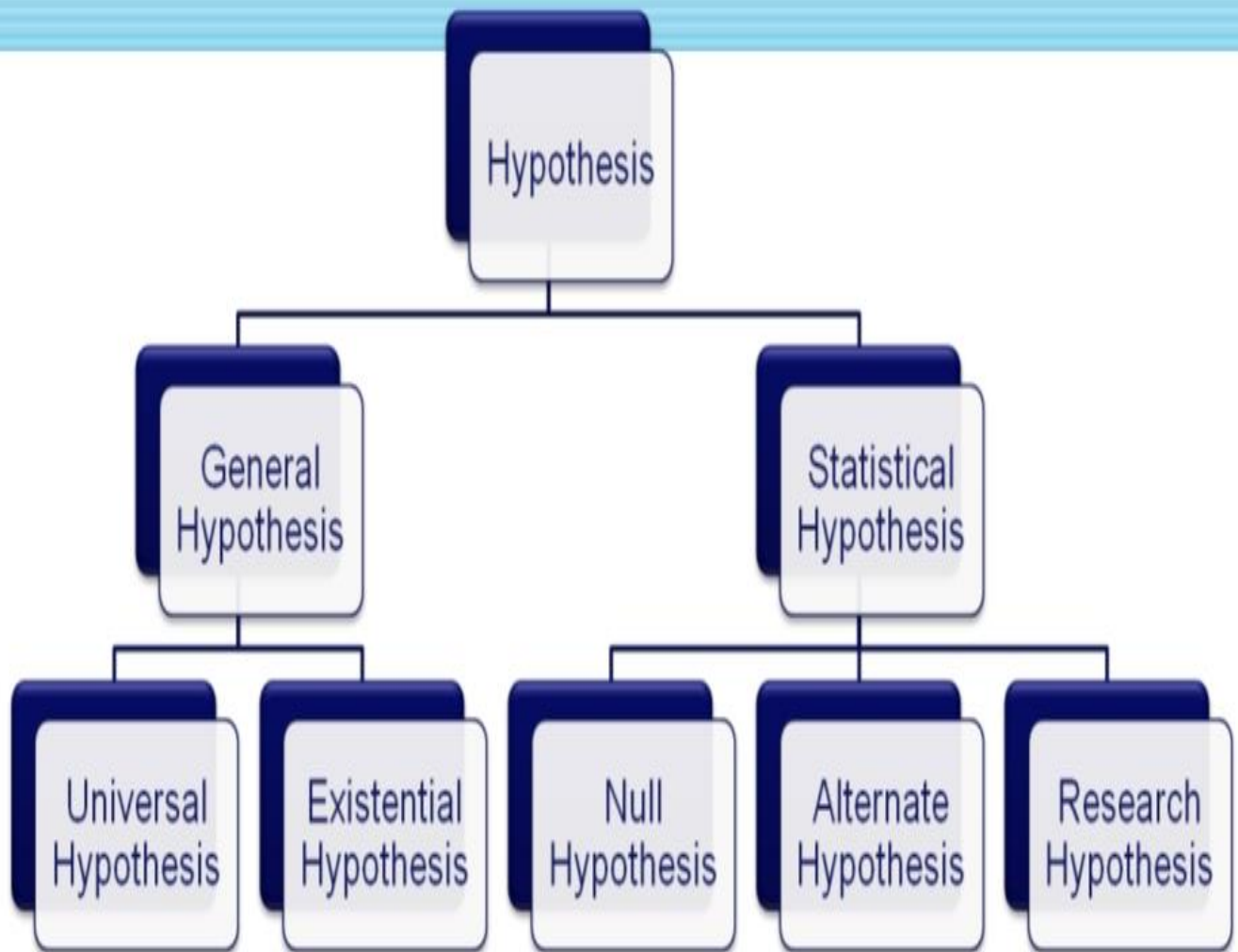
Generation by simple enumeration

Method of conformity

Analogy

Associated differentiation

Types of Hypothesis



Universal hypothesis

- ❖ It is one, which denotes that, the stated relationship holds for all specified variables for all times at all places.
- ❖ For example,
 - “if brave soldiers are frequently rewarded for their better performance, they will perform better.”
- ❖ This relationship hold true for all time and all place.

Existential Hypothesis

- ❖ It is one in which the stated relationship is said to exist for at least one particular case.
- ❖ For example,
 - There are at least few corporate workers who are scrounger and may not perform better despite the fact that he is being awarded suitably for better performance.s

Null Hypothesis

- ❖ Null hypothesis always predicts that there is no relationship between the variables being studied.
- ❖ The researcher wishes to disapprove this hypothesis.
- ❖ It is denoted by H_0
- ❖ For example:
 - “There is no relationship between smoking and lung cancer.”

Alternate Hypothesis

- ❖ The alternate hypothesis always predicts that there will be a relationship between the variables being studied.
- ❖ It is denoted by H_a



**Non Directional
Hypothesis**

**Directional
Hypothesis**

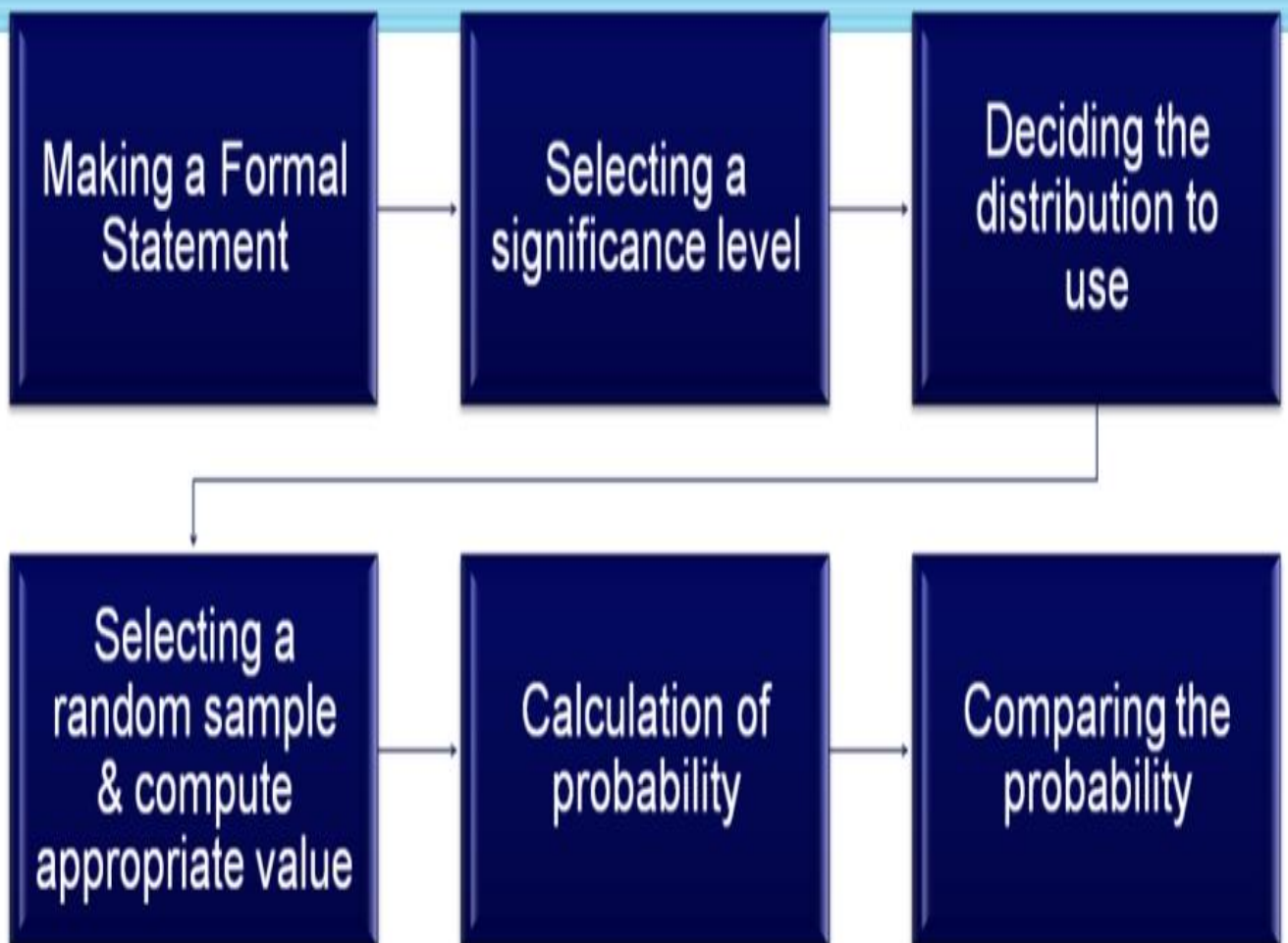
Continued

- ❖ If the hypothesis simply predicts that there will be a difference between the two groups, then it is a **non-directional hypothesis**. It is non-directional because it predicts that there will be a difference but does not specify how the groups will differ.
 - “smoking leads to lungs cancer”
- ❖ If, however, the hypothesis uses so-called comparison terms, such as “greater,” “less,” “better,” or “worse,” then it is a **directional hypothesis**. It is directional because it predicts that there will be a difference between the two groups and it specifies how the two groups will differ.
 - “smoking will increase the chances of lungs cancer in a person than a person who do not smoke.”

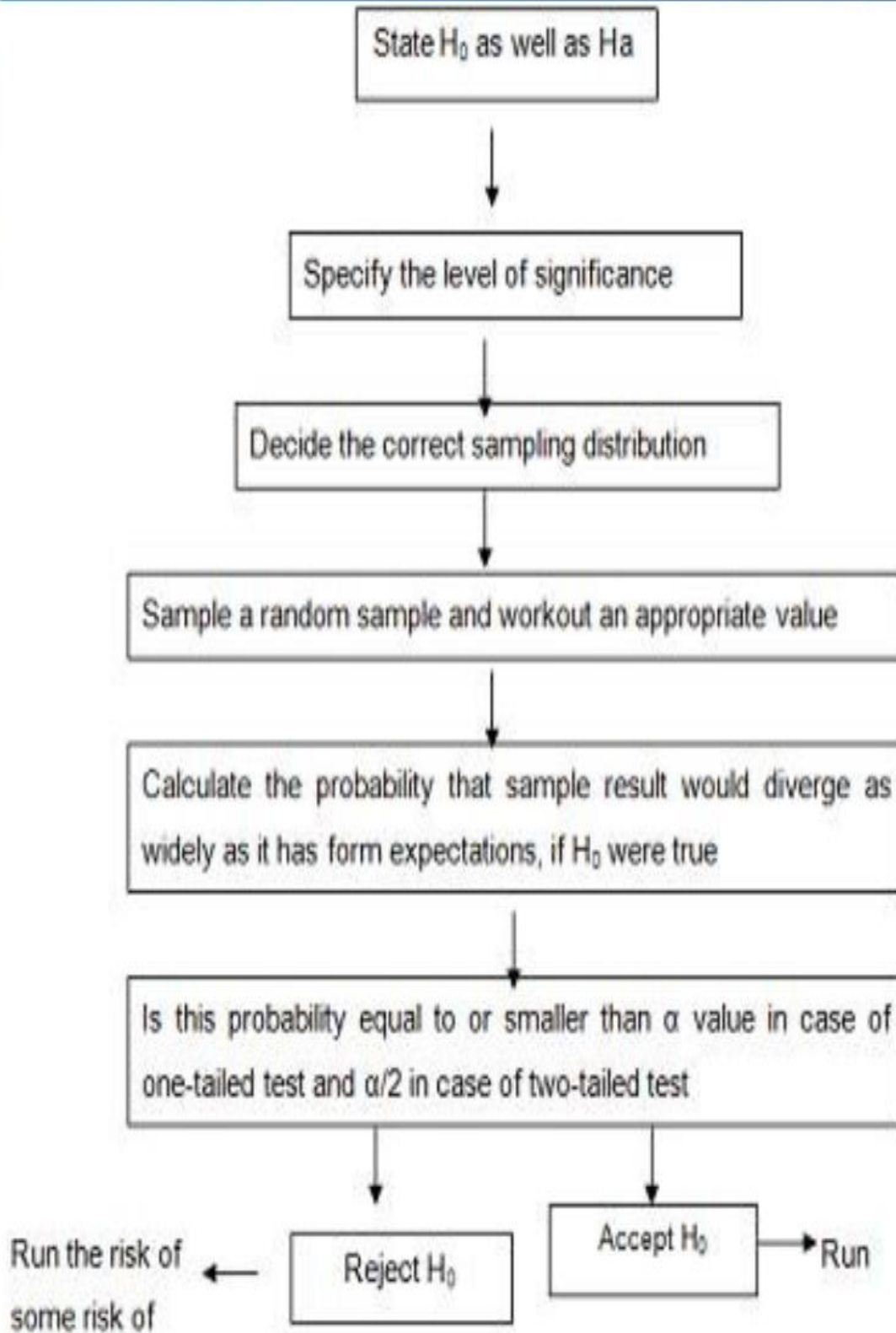
Research Hypothesis

- ❖ This type of hypothesis is derived from some type of theory or some observation and examination.
- ❖ In other words, the hypothesis set upon the basis of theory or prior observation or on logical grounds.

Procedure for hypothesis testing



Flow diagram of hypothesis testing



The image features a top section with a purple and blue abstract pattern of curved lines. Below this is a horizontal band with a blue gradient and horizontal stripes. A white rounded rectangle is centered within this band, containing the text 'Thank You!' in a blue, cursive font. The bottom half of the image is a plain white background.

Thank You !

