

In social research, a researcher needs a **tentative answer** to their research question before going into the field. This tentative answer is called a **hypothesis**. The word etymologically is made of two words — "*hypo*" (less than) and "*thesis*" (a proposition) — meaning it is **less certain than a proven statement**.

A hypothesis is the backbone of scientific research. It gives the researcher direction, focus, and a clear path from problem to conclusion.

According to John W. Creswell in his 1994 work, **Research Design: Qualitative & Quantitative Approaches**, a hypothesis is defined as a formal statement that presents the expected relationship between an independent and dependent variable.

Social Work Example: A social worker visiting urban slums observes that children who work as child laborers rarely attend school. She forms a hypothesis:

"Children engaged in child labor have significantly higher school dropout rates than children who are not engaged in labor."

This is her hypothesis — she will now test it with real data.

Types of Hypothesis

This is the most important section — learn all types with examples.

Category 1 — Research Hypothesis

A research hypothesis directly states the expected relationship between variables in clear, testable language. It has two subtypes based on complexity:

A. Simple Research Hypothesis

Predicts the relationship between **one independent variable and one dependent variable**.

"Regular attendance at school improves academic performance of children."

- Independent variable = School attendance
- Dependent variable = Academic performance

Social Work Example:

"Participation in a self-help group significantly increases the income of rural women."

B. Complex Research Hypothesis

Predicts the relationship between **two or more independent variables** and **two or more dependent variables**.

"Poverty and parental illiteracy together lead to both child labor and school dropout among urban slum children."

- Independent variables = Poverty + Parental illiteracy
 - Dependent variables = Child labor + School dropout
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Research hypotheses are further classified as:

C. Directional Hypothesis

Specifies **which direction** the relationship will go — which variable will be higher, lower, more, or less.

Usually derived from existing theory. The researcher predicts not just that a relationship exists but also its nature and direction.

Social Work Example:

"Women who attended literacy programmes earn significantly higher daily wages than women who did not attend."

D. Non-Directional Hypothesis

States that **a relationship or difference exists** but does **not specify the direction**.

Used when there is little theory available or when previous studies give contradictory findings. It implies impartiality on the researcher's part.

Social Work Example:

"There is a significant difference in the daily wages of women who attended literacy programmes and women who did not attend."

E. Associative Hypothesis

Proposes that **when one variable changes, the other also changes** — but does not claim that one *causes* the other.

"Higher levels of community participation are associated with lower rates of juvenile delinquency."

It says the two are connected — not that one causes the other.

F. Causal Hypothesis

Proposes a direct **cause-and-effect relationship** between variables. The independent variable is deliberately manipulated to produce an effect on the dependent variable.

"Providing mid-day meals in schools causes a reduction in student dropout rates."

Here — the mid-day meal (cause) directly produces the effect (lower dropout). This is a causal hypothesis.

Category 2 — Statistical Hypothesis

When a research hypothesis **needs to be tested mathematically**, it is converted into a statistical hypothesis. Statistical hypotheses are of two types:

G. Null Hypothesis (H_0)

What it is: The null hypothesis is a hypothesis of **"no difference" and "no relationship"** between two variables. It states that any **observed difference between groups is due to chance or sampling error** — **not a real relationship.**

The word *"Null"* comes from German meaning **zero** — so H_0 means the difference is zero, or non-significant.

Key points:

- It is **non-directional** — does not say which direction
- Used in a **two-tailed test**
- Formulated usually **for the purpose of being rejected**
- It represents a theory put forward to be tested — not because it is believed true but to be disproved
- Has serious consequences if an incorrect decision is made

Statistical form:

$H_0 : \text{Mean} = 120$ (*the population mean equals 120*) $H_0 : \text{Mean}_1 = \text{Mean}_2$ (*no difference between two groups*)

Simple Example:

$H_0 : \text{"There is no significant difference in school dropout rates between children of daily wage laborers and children of salaried employees."}$

Social Work Example: A researcher studies the impact of a counseling programme on domestic violence:

H_0 : *"The counseling programme has no significant effect on reducing domestic violence incidents."*

If data shows a clear reduction $\rightarrow H_0$ is rejected $\rightarrow$ the programme actually works.

H. Alternative Hypothesis (H_1 or H_a)

What it is: Also called the **experimental hypothesis**. It is the direct opposite of the null hypothesis. It states that a **real and significant difference or relationship does exist** — and this difference is not due to chance.

Key points:

- It is what the researcher **hopes to prove**
- It is **reached only when H_0 is rejected**
- The alternative hypothesis is frequently the **actual desired conclusion** of the researcher
- Can be **directional or non-directional**
- Designated as H_1 or H_a

Statistical form:

H_1 : Mean $\neq$ 120 (*the population mean does not equal 120*) H_1 :
Mean $>$ 120 or Mean $<$ 120 (*directional form*)

Simple Example:

H_1 : *"Children of daily wage laborers have significantly higher school dropout rates than children of salaried employees."*

Social Work Example:

H_1 : *"The counseling programme significantly reduces domestic violence incidents among participating families."*

Nature of a Hypothesis

A hypothesis is not just any guess — it has a specific nature:

- It is a **clear statement** of what is intended to be investigated
- It must be stated **before research is conducted**
- It **identifies the research objectives** and key concepts involved
- It is a **powerful tool** for advancing knowledge — consistent with existing facts and open to further inquiry
- It is **testable** — capable of being verified or falsified
- It is **not a moral or ethical judgment** — it is value-neutral
- It is **neither too specific nor too general** — balanced in scope
- It is considered **valuable even if proven false** — because disproving also adds to knowledge

- It is a **prediction of consequences** — it says what will happen under what conditions

Understanding Variables (Essential Before Types of Hypothesis)

Before learning types of hypothesis, you must understand **variables** — because every hypothesis is a statement about variables.

A **variable** is any property or characteristic that can take on different values. Weight, age, income, education level — all are variables because they differ from person to person.

There are two key types:

Independent Variable: The variable that the researcher manipulates or changes — the *cause*. It is isolated from other factors to see its effect.

Dependent Variable: The variable that changes *because of* the independent variable — the *effect*. It is what the researcher measures.

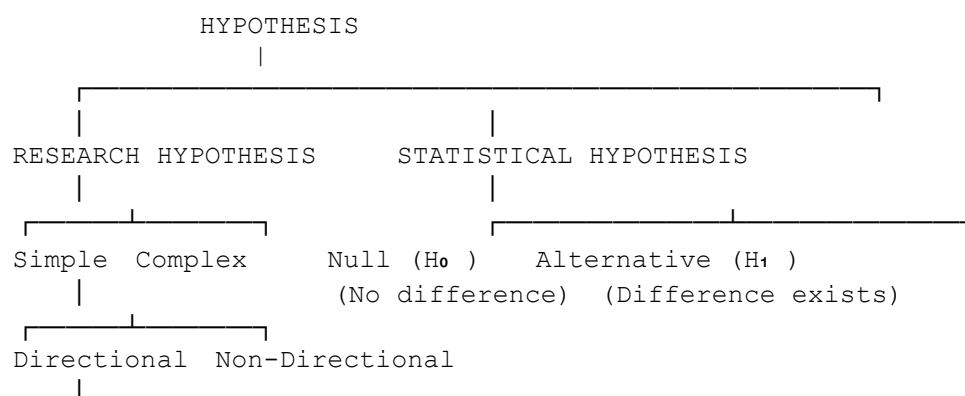
Example: A researcher studies whether attending a counseling programme reduces domestic violence.

- Independent variable = **Counseling programme** (the cause)
- Dependent variable = **Domestic violence incidents** (the effect — what gets measured)

Relationships Between Variables:

- **Positive relationship** — when one increases, the other also increases (*e.g., income and quality of food*)
- **Negative relationship** — when one increases, the other decreases (*e.g., education and child marriage*)
- **Zero relationship** — no significant relationship between the two variables

Diagram — Types of Hypothesis (Draw this in your answer)



How to Structure Your 15-Mark Answer

Section	Content	Marks
Introduction	Meaning, Greek origin, definition	1 - 2
Definitions	PPT + Mill, Goode & Hatt, Lundberg, Coffey	2
Nature & Characteristics	6 points with brief examples	2
Attributes	All 6 attributes with examples	3
Variables	Independent + Dependent (briefly)	1
Types of Hypothesis	All types with examples — Research + Statistical	4 - 5
Errors in Testing	Type I and Type II — brief table	1
Conclusion	Role of hypothesis in social work research	1

Pro tips for maximum marks:

- Use the **Greek origin** of the word in your introduction — examiners love this
- Write **H₀** and **H₁** with symbols — looks professional and academic
- Always give a **social work-specific Indian example** for each type
- Use exact phrases: “*formulated for the purpose of being rejected*” (null hypothesis) and “*conjectural statement*” — these are from your PPT and examiners recognize them
- Draw the **Types of Hypothesis tree diagram** — it earns 1-2 extra marks
- Mention **Type I and Type II errors** — very few students include this, so it immediately makes your answer stand out