

Cognitive psychology (practical)

Introduction to basic concepts

Hypothesis

A hypothesis is a tentative statement about the relationship between two or more variables. It is a specific, testable prediction about what you expect to happen in a study. For example, a study designed to look at the relationship between sleep deprivation and test performance might have a hypothesis that states, "This study is designed to assess the hypothesis that sleep-deprived people will perform worse on a test than individuals who are not sleep-deprived."

The hypothesis is what the researchers predict the relationship between two or more variables, but it involves more than a guess. Most of the time, the hypothesis begins with a question which is then explored through background research. It is only at this point that researchers begin to develop a testable hypothesis.

In a study exploring the effects of a particular drug, the hypothesis might be that researchers expect the drug to have some type of effect on the symptoms of a specific illness. In psychology, the hypothesis might focus on how a certain aspect of the environment might influence a particular behavior.

Remember, a hypothesis does not have to be correct.¹ While the hypothesis predicts what the researchers expect to see, the goal of the research is to determine whether this guess is right or wrong. When conducting an experiment, researchers might explore a number of factors to determine which ones might contribute to the ultimate outcome.

Examples

A hypothesis often follows a basic format of "If {this happens} then {this will happen}." One way to structure your hypothesis is to describe what will happen to the dependent variable if you make changes to the independent variable.

The basic format might be:

"If {these changes are made to a certain independent variable}, then we will observe {a change in a specific dependent variable}."

A few examples:

- "Students who eat breakfast will perform better on a math exam than students who do not eat breakfast."
- "Students who experience test anxiety prior to an English exam will get higher scores than students who do not experience test anxiety."
- "Motorists who talk on the phone while driving will be more likely to make errors on a driving course than those who do not talk on the phone."
- **null hypothesis** is a **hypothesis** that says there is no statistical significance between the two variables in the **hypothesis**. ... In the **example**, Susie's **null hypothesis** would be something like this: There is no statistically significant relationship between the type of water I feed the flowers and growth of the flowers.

- **Independent variable**

- The variable that is systematically changed (i.e., varied) in an experiment.

An **independent variable** is the variable that is changed or controlled in a scientific experiment to test the effects on the dependent variable.

- **Dependent variable**

- The variable that is measured in an experiment.

- A **dependent variable** is the variable being tested and measured in a scientific experiment.

- The dependent variable is 'dependent' on the independent variable. As the experimenter changes the independent variable, the effect on the dependent variable is observed and recorded.

- **Independent and Dependent Variable Example**

- For example, a scientist wants to see if the brightness of light has any effect on a moth being attracted to the light. The brightness of the light is controlled by the scientist. This would be the independent variable. How the moth reacts to the different light levels (distance to light source) would be the dependent variable.

Abstract

An **abstract** is a brief summary of a **research** article, thesis, review, conference proceeding, or any in-depth analysis of a particular subject and is often used to help the reader quickly ascertain the paper's purpose.

How to write a report?

The main components of report are;

Abstract

Introduction

Method:

- **Type of Practical:** Experimental.
- **Design of Practical:** Repeated measures.

Independent variable:

Dependent variable:

Experimental Hypothesis:

Null Hypothesis:

Subject:

- Name:
- Age:
- Gender:
- Education:

Apparatus: during practical which things you have used

Procedure: how was the procedure from start to end. Write each and every step

Results; findings

Conclusion; explain the findings, what you have understand from practical

References; write the sources from where you have took the material like website, books, journal etc