

### Experimental Psychology

the branch of psychology concerned with the scientific investigation of basic psychological processes such as learning, memory, and cognition in humans and animals.

- in a controlled setting in order to predict, explain, or influence behavior or other psychological phenomena
- aims at establishing quantified relationships and explanatory theory through the analysis of responses under various controlled conditions

### scientific Research

-a systematic and objective attempt to provide answers to certain questions or problems , develop and discover an organised body of study.

a systematic method consisting of enunciating the problem, formulating a hypothesis, collecting facts or data, analysing the facts and reaching certain conclusions either in solution form or generalisation for some theoretical information.

### Research Process

define R problem > Review of literature > formulate H > Design R > collect data > analyse the data > hypothesis testing > interpretation of data > preparing report > presenting results

### Types of Research

**Descriptive** - survey and fact finding enquiries. Describe the current state of affairs. ex Ex-post facto R

**Analytical**-analysis of already available information to make critical evaluation

**Action or Applied** - aim is finding a solution for a problem at hand

**fundamental** - concerned with generalisations and formulation of a theory.

**Quantitative** - measurement of quantity or amount

**Qualitative** - aim is to discover underlying motives of human behavior.

**Conceptual** - related to some abstract idea or theory. used to develop new theories or reinterpret existing ones.

**Empirical** - relies on observation or experience alone. Data-based research. Alia experimental R.

**Other** - one time OR longitudinal; field setting OR laboratory R ; Exploratory R; Historical R.

### Hypothesis

Hypothesis - a testable proposition; a tentative solution formed on a problem.

Types:

**Null Hypothesis (Ho)** - indicating no relationship or no-effect or negation between variables.

**Alternate Hypothesis (Ha/ H1)** or working hypothesis - indicating some relationship between variables.

### Sources of ROL

journals, books, review articles, abstract, internet, dissertations, professors, newspapers, etc.

### Sampling

**Population** - population or universe being considered or of interest

**Probability sampling** likelihood of inclusion of each element in the sample.

**Non Probability Sampling**- no way of assessing the likelihood of inclusion of each element in sample

**Non Probab ility contd.**

**mixed sampling** - involve characteristics of prob and non prob sampling



### Sampling (cont)

<b>sample</b> - subset of population, used as representative of population.	Simple Random sampling -equal chance of being included. Ex. fishbowl method, Tippet's table of Random nos.	Purposive/ Judgemental sampling	Area Sampling - selecting a particular geographical location for sample collection
	Stratified Random sampling - Strata. Ex sex	Snowball sampling	Cluster Sampling - selecting groups rather than individuals
	Systematic sampling -Tippet's Table.	Quota Sampling - strata	Multistage sampling - + cluster sampling (large sample unit breaking into then smaller units to study)

### Sampling Error

the difference between parameter (measure from population and statistic(measure from sample))	Based on A)Variability in the population & B)Size of sample
	Higher the SE, poorer the statistical inference.

### Research Design

conceptual structure within which a R is conducted, in Underbuilt for collection, measurement and analysis of data; a framework for R plan of action	characteristics of R Design - Neutral, Reliable, Valid, Generalisable	Two Approaches to R Design: Qualitative & Quantitative
--	---	--



By **SH (Sana\_H)**  
[cheatography.com/sana-h/](https://cheatography.com/sana-h/)

Published 9th January, 2023.  
 Last updated 9th January, 2023.  
 Page 2 of 6.

Sponsored by **ApolloPad.com**  
 Everyone has a novel in them. Finish Yours!  
<https://apollopad.com>

### Research Design (cont)

Types of R Designs	<b>Descriptive Research Design</b> - explanation of situation/case in depth; theoretical basis; presents data in an understandable manner ; no control/change in variables ; only observational. Do customers prefer product A, B or C ?	<b>Experimental R Design</b> - manipulation of variable to observe changes in another variable; controlled and randomized. Include DV, IV, hypothesis, operational definition	<b>Correlational R Design</b> - relationships between two/more variables ; non experimental ; no manipulation of variables ; gives a + or - or 0 correlation; result presented with numerical value called correlation coefficient	<b>Explanatory R Design</b> - explores when limited information is available; helps increase understanding of a topic; answers why, how; predicts future occurrences; cause and effect model ; improved understanding of previously unresolved problem.
--------------------	--	---	--	---



By **SH (Sana\_H)**  
[cheatography.com/sana-h/](https://cheatography.com/sana-h/)

Published 9th January, 2023.  
Last updated 9th January, 2023.  
Page 3 of 6.

Sponsored by **ApolloPad.com**  
Everyone has a novel in them. Finish Yours!  
<https://apollopad.com>

### Research Design (cont)

Types : cross sectional- studying one particular section of society at a given point in time. ex. tracking social media use in Gen Z in Netherlands.

Longitudinal - extended period of time on a group of people. ex. cyber bullying from 2022-2024

Normative-comparison of result with an existing norm

Correlational- find out relationship between variables. Ex video games and mental health

Comparative- Comparison of two or more. Ex salary of employees at two different companies

Classification- arrange data into categories. Ex classifying customers based on their buying beh

Archival- search for past records and get info. Ex tracking company sales over years

Types: True experimental  
pretest posttest design w/o  
control group

pretest posttest with control  
group

posttest with control group

design , Quasi-experimental

Types: Naturalistic observation  
Survey  
Archival Research



By **SH** (Sana\_H)  
[cheatography.com/sana-h/](https://cheatography.com/sana-h/)

Published 9th January, 2023.  
Last updated 9th January, 2023.  
Page 4 of 6.

Sponsored by **ApolloPad.com**  
Everyone has a novel in them. Finish  
Yours!  
<https://apollopad.com>

### Research Design (cont)

Between subjects design(separate groups)-Randomised groups design:

Two randomised groups design

More than two randomized groups design

Matched group design-all subjects are tested on a matching variable sn then formed into groups

Factorial design-values of two/more IV are studies in all possible combinations to find out independent and interactive effects on DV

Within subjects design (only one group of subjects)

### Variables

Attributes of objects, events, things, being, etc that can be measured. There are controlled, manipulated or observed by the experimenter.

IV-manipulated,measured and selected by experimental for purpose of observing changes in DV.

**Directive & Non-directive hypothesis**

DV -experimenter makes prediction about this variable

### Measurement Scales

Nominal scale - use of numbers to name objects.

Interval scale - includes charac of nominal & ordinal scales , numerical equals distance on a scale indicating equal distances in properties of objects measured.

Ordinal scale - rank order of objects

Ratio scale -includes properties of all other scales & an absolute zero point.

**Interval scale is most commonly used in psychology**

### Data Collection sources

Primary Data -observation method, interview method, Questionnaires, surveys

secondary Data -Case Study, Government Records, Newspapers, Journals, Articles, Archives, Internet , Databases

C

By SH (Sana\_H)  
[cheatography.com/sana-h/](https://cheatography.com/sana-h/)

Published 9th January, 2023.  
Last updated 9th January, 2023.  
Page 6 of 6.

Sponsored by [ApolloPad.com](https://apollopad.com)  
Everyone has a novel in them. Finish Yours!  
<https://apollopad.com>

