

Psychology
Chapters 1,2 and Appendix B
Definitions

Academic psychology

A branch of psychology focusing on research and instruction in the various areas or fields of study in psychology.

Alternative hypothesis

An assertion that in the underlying population from which the sample was obtained, there *is* a difference between the average performance of individuals in one group compared to another.

Applied psychology

The branch of psychology applying psychological principles to practical problems in other fields, such as education, marketing, or industry.

Behaviour

Observable activities of an organism, often in response to environmental cues.

Behavioural genetics

A subfield of psychology looking at the influence of genes on human behaviour.

Behaviourism

A branch of psychological thought arguing that psychology should study only directly observable behaviours rather than abstract mental processes.

Biases

Distorted beliefs based on a person's subjective sense of reality.

Case study

Study focusing on a single person.

Client-centred therapy

An approach to therapy founded by Carl Rogers, based on the notion that the client is an equal and that positive gains are made by mirroring clients' thoughts and feelings in an atmosphere of unconditional positive regard.

Clinical and counselling psychology

The study of abnormal psychological behaviour and interventions designed to change that behaviour.

Coefficient of determination

The degree to which values on one variable can be predicted by knowing the values of the other variable.

Cognitive neuroscience

The study of mental processes and how they relate to the biological functions of the brain.

Cognitive psychology

The field of psychology studying mental processes as forms of information processing, or the ways in which information is stored and operated in our minds.

Collectivist

A culture whose members focus more on the needs of the group and less on individual desires.

Consciousness

Personal awareness of ongoing mental processes, behaviours, and environmental events.

Control group

Group that has not been or will not be exposed to the independent variable.

Correlation

Predictable relationship between two or more variables.

Correlation coefficient

Statistic expressing the strength and nature of a relationship between two variables.

Cross-cultural psychology

The study of what is generally or universally true about human beings regardless of culture.

Cultural psychology

The study of how cultural practices shape psychological and behavioural tendencies and influence human behaviour.

Cultural universality

Behaviours and practices that occur across all cultures.

Debriefing

Supplying full information to participants at the end of their participation in a research study.

Deductive reasoning

Reasoning proceeding from broad basic principles applied to specific situations.

Dependent variable

Condition or event that you expect to change as a result of variations in the independent variable.

Descriptive research methods

Studies that allow researchers to demonstrate a relationship between the variables of interest, without specifying a causal relationship.

Descriptive statistics

Statistics used to describe and summarize data.

Double-blind procedure

Study in which neither the participant nor the researcher knows what treatment or procedure the participant is receiving.

Effect size

A standardized measure that reflects the degree of relationship or size of the difference between two or more variables.

Empirical

Able to be tested in objective ways.

Evolutionary psychology

A field of study believing that the body and brain are products of evolution and that genetic inheritance plays an important role in shaping the complete range of thoughts and behaviours.

Experiment

Controlled observation in which researchers manipulate the presence or amount of the independent variable to see what effect it has on the dependent variable.

Frequency polygons

A line graph depicting a grouped frequency distribution, which is created by connecting the midpoints of each class of data.

Functionalism

A philosophical approach that considers how mental processes function to adapt to changing environments.

Gestalt psychology

The field of psychology arguing that we have inborn tendencies to structure what we see in particular ways and to structure our perceptions into broad perceptual units.

Grouped frequency distribution

A count of the number of times specific data points fall into a range of values in a data set.

Hawthorne effect

People who are being observed in studies or at their workplace improve or change some of their behaviour simply because they are being watched or studied, not in response to an experimental manipulation.

Histograms

A bar chart showing the number of times specific data points fall into a range of values in a data set.

Humanistic psychology

Theory of psychology that sought to give greater prominence to special and unique features of human functioning.

Hypothesis

A general statement about the way variables relate that is objectively falsifiable.

Hypothesis testing

Testing a statement or claim about a population using a sample and, in its simplest form, looking at experimental and control group differences.

Hypothetico-deductive reasoning

Process of modern science where scientists begin with an educated guess, perhaps based on previous research, about how the world works, and then set about designing small controlled observations to support or invalidate that hypothesis.

Independent variable

Condition or event that is thought to be a factor in changing another condition or event.

Individualistic

A culture that places the wants or desires of the person over the needs of the group.

Inductive reasoning

Reasoning process proceeding from small specific situations to more general truths.

Inferential statistics

Statistics used to draw conclusions about research data.

Information processing

The means by which information is stored and operates internally.

Informed consent

Requirement that researchers give as much information as possible about the purpose, procedures, risks, and benefits of the study so that a participant can make an informed decision about whether or not to participate.

Introspection

A method of psychological study involving careful evaluation of mental processes and how simple thoughts expand into complex ideas.

Mean

Arithmetic average of a set of scores.

Measures of association

Descriptive statistics that quantify and summarize the degree of relationship or association between variables.

Measures of central tendency

Numbers used to summarize data sets.

Measures of variability

Indicators that tell how different the values are within a data set.

Median

The data set value that represents the midpoint of an ordered set of numbers.

Mental processes

Activities of our brain when engaged in thinking, observing the environment, and using language.

Mode

The most frequent or most common value in a data set.

Naturalistic observation

A study in which researchers directly observe people in a study behaving as they normally do.

Negative correlation

Relationship in which, on average, scores on one variable increase as scores on another variable decrease.

Negative or inverse relationship

A relationship where as the value of one variable increases, values in another associated variable decrease.

Negatively skewed distributions

A distribution where most values occur at the upper end of the scale.

Neuroscience

The study of psychological functions by looking at biological foundations of those functions.

Normal distribution

A symmetrical, bell-shaped distribution in which most scores are in the middle with smaller groups of equal size at either end.

Null hypothesis

An assertion that in the underlying population from which the sample was obtained, there is no difference between the average performance of individuals in one group compared to another.

Operationalize

To develop a working definition of a variable that allows you to test it.

Pearson product-moment correlation coefficient

A statistic indicating the degree of association or relationship between two variables or measures, ranging from -1 to $+1$.

Perfect correlation

One in which two variables are exactly related, such that low, medium, and high scores on both variables are always exactly related.

Positive correlation

Relationship in which, on average, scores on two variables increase together.

Positive or direct relationship

A relationship where as the value of one variable increases, so do values in another associated variable.

Positively skewed distribution

A distribution where most values occur at the lower end of the scale.

Psychoanalytic theory

Psychological theory that human mental processes are influenced by the competition between unconscious forces to come into awareness.

Psychology

The study of mental processes and behaviours.

Punishment

An experience that produces a decrease in a particular behaviour.

Random sample

A group or set made by randomly selecting people or items from a larger population; like closing your eyes and picking any two socks from your drawer.

Random selection

Identifying a sample in such a way that everyone in the population of interest has an equal chance of being involved in the study.

Range

The difference between the smallest and the largest value in a data set.

Reinforcement

A learning process that increases the likelihood a given response will be repeated.

Replication

Repeated testing of a hypothesis to ensure that the results you achieve in one experiment are not due to chance.

Research ethics board (REB)

Research oversight group that evaluates research to protect the rights of participants in the study.

Sampling distribution

The theoretical distribution of a sample statistic; for example, the difference between two sample means taken from a population.

Significance level

The level of risk researchers would be willing to take in terms of making an incorrect conclusion.

Social neuroscience

The study of social functioning and how it is tied to brain activity.

Sociobiologists

Theorists who believe humans have a genetically innate concept of how social behaviour should be organized.

Standard deviation

Statistical index of how much scores vary within a group.

Stimuli

Elements of the environment that trigger changes in our internal or external states.

Structuralism

A philosophical approach that studies the structure of conscious experience.

Unconscious

Hypothesized repository of thoughts, feelings, and sensations outside human awareness, thought in some theories to have a strong bearing on human behaviour.

Ungrouped frequency distribution

A count of the number of times each specific data point or score appears in a data set.

Variable

Condition, event, or situation that is studied in an experiment.

Variance

A calculated indicator of the degree to which values in a data set differ from the mean value of that data set; the average of squared deviations about the mean.

Voluntarism

A theory in which will is regarded as the ultimate agency in human behaviour; belief that much of behaviour is motivated and that attention is focused for an explicit purpose.