

Approaches in Psychology

Origins of Psychology: Wundt, introspection and the emergence of Psychology as a science.

The basic assumptions of the following approaches:

Learning approaches: i) the behaviourist approach, including classical conditioning and Pavlov's research, operant conditioning, types of reinforcement and Skinner's research; ii) social learning theory including imitation, identification, modelling, vicarious reinforcement, the role of mediational processes and Bandura's research.

The cognitive approach: the study of internal mental processes, the role of schema, the use of theoretical and computer models to explain and make inferences about mental processes. The emergence of cognitive neuroscience.

The biological approach: the influence of genes, biological structures and neurochemistry on behaviour. Genotype and phenotype, genetic basis of behaviour, evolution and behaviour.

The psychodynamic approach: the role of the unconscious, the structure of personality, that is Id, Ego and Superego, defence mechanisms including repression, denial and displacement, psychosexual stages.

Humanistic Psychology: free will, self-actualisation and Maslow's hierarchy of needs, focus on the self, congruence, the role of conditions of worth. The influence on counselling Psychology.

Comparison of approaches.

Biopsychology

The divisions of the nervous system: central and peripheral (somatic and autonomic).

The structure and function of sensory, relay and motor neurons. The process of synaptic transmission, including reference to neurotransmitters, excitation and inhibition.

The function of the endocrine system: glands and hormones.

Research methods

The fight or flight response including the role of adrenaline.

Localisation of function in the brain and hemispheric lateralisation: motor, somatosensory, visual, auditory and language centres; Broca's and Wernicke's areas, split brain research. Plasticity and functional recovery of the brain after trauma.

Ways of studying the brain: scanning techniques, including functional magnetic resonance imaging (fMRI); electroencephalogram (EEGs) and event-related potentials (ERPs); post-mortem examinations.

Biological rhythms: circadian, infradian and ultradian and the difference between these rhythms. The effect of endogenous pacemakers and exogenous zeitgebers on the sleep/wake cycle.

Experimental method. Types of experiment, laboratory and field experiments; natural and quasi-experiments.

Observational techniques. Types of observation: naturalistic and controlled observation; covert and overt observation; participant and non-participant observation.

Self-report techniques. Questionnaires; interviews, structured and unstructured.

Correlations. Analysis of the relationship between co-variables. The difference between correlations and experiments.

Content analysis.

Case studies.

Aims: stating aims, the difference between aims and hypotheses.

Hypotheses: directional and non-directional.

Sampling: the difference between population and sample; sampling techniques including: random, systematic, stratified, opportunity and volunteer; implications of sampling techniques, including bias and generalisation.

Scientific processes

		<p>Pilot studies and the aims of piloting.</p> <p>Experimental designs: repeated measures, independent groups, matched pairs.</p> <p>Observational design: behavioural categories; event sampling; time sampling.</p> <p>Questionnaire construction, including use of open and closed questions; design of interviews.</p> <p>Variables: manipulation and control of variables, including independent, dependent, extraneous, confounding; operationalisation of variables.</p> <p>Control: random allocation and counterbalancing, randomisation and standardisation.</p> <p>Demand characteristics and investigator effects.</p> <p>Ethics, including the role of the British Psychological Society's code of ethics; ethical issues in the design and conduct of psychological studies; dealing with ethical issues in research.</p> <p>The role of peer review in the scientific process.</p> <p>The implications of psychological research for the economy.</p> <p>Reliability across all methods of investigation. Ways of assessing reliability: test-retest and inter-observer; improving reliability.</p> <p>Types of validity across all methods of investigation: face validity, concurrent validity, ecological validity and temporal validity. Assessment of validity. Improving validity.</p> <p>Features of science: objectivity and the empirical method; replicability and falsifiability; theory construction and hypothesis testing; paradigms and paradigm shifts.</p> <p>Reporting psychological investigations. Sections of a scientific report: abstract, introduction, method, results, discussion and referencing.</p>	
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	<p>Data handling and analysis</p>	<p>Quantitative and qualitative data; the distinction between qualitative and quantitative data collection techniques.</p> <p>Primary and secondary data, including meta-analysis.</p> <p>Descriptive statistics: measures of central tendency – mean, median, mode; calculation of mean, median and mode; measures of dispersion; range and standard deviation; calculation of range; calculation of percentages; positive, negative and zero correlations.</p> <p>Presentation and display of quantitative data: graphs, tables, scattergrams, bar charts, histograms.</p> <p>Distributions: normal and skewed distributions; characteristics of normal and skewed distributions.</p> <p>Analysis and interpretation of correlation, including correlation coefficients.</p> <p>Levels of measurement: nominal, ordinal and interval.</p> <p>Content analysis and coding. Thematic analysis.</p>	
	<p>Inferential testing</p>	<p>Introduction to statistical testing; the sign test. When to use the sign test; calculation of the sign test.</p> <p>Probability and significance: use of statistical tables and critical values in interpretation of significance; Type I and Type II errors.</p> <p>Factors affecting the choice of statistical test, including level of measurement and experimental design. When to use the following tests: Spearman's rho, Pearson's r, Wilcoxon, Mann-Whitney, related t-test, unrelated t-test and Chi-Squared test.</p>	