

XH Humanities & Social Sciences

XH5: Psychology

Section XH5.1: Research Methods and Statistics

Approaches to Research: Philosophical worldviews & criteria involved in approach. Research design: Quantitative, Qualitative, and Mixed methods.

Designing Research: Research problems, Purpose statement, Variables and Operational Definitions, Hypothesis, Sampling.

Nature of Quantitative & Qualitative Research: Interview, Self-completion questionnaires (Survey), Observation, Experiment, Quasi-experiment, Field studies, Focus groups discussions, Narratives, Case studies, Ethnography.

Ethics in conducting and reporting research.

Statistics in Psychology: Measures of Central Tendency and Dispersion. Normal Probability Curve. Parametric and Non-parametric tests, Effect size and Power analysis.

Correlational Analysis: Correlation [Product Moment, Rank Order], Partial correlation, multiple correlation. Special Correlation Methods: Biserial, Point biserial, tetrachoric, phi coefficient. Regression: Simple linear regression, Multiple regression. Factor analysis: Assumptions, Methods, Rotation and Interpretation.

Experimental Designs: Factorial Design, Randomized Block Designs, Repeated Measures Design, Single-subject designs, Cohort studies, Statistics for experimental design: ANOVA, MANOVA, ANCOVA.

Section XH5.2: Psychometrics

Foundations of Psychological measurement; Basic components: Scales and items' construction and analysis of items: Intelligence test items, Performance tests, Ability & Aptitude test, Personality questionnaires. Method of test construction. Standardization of measures: Reliability, Validity, Norms. Application of assessment and measurements in Tests. Applications of psychological testing in various settings-educations, counselling and guidance, clinical, organizational and developmental.

Section XH5.3: Biological and Evolutionary Basis of Behaviour

Heredity and behaviour, Evolution and natural selection, Nervous system, Structures of the brain and their functions. Neurons: Structure, functions, types, neural impulse, synaptic transmission. Neurotransmitters. Hemispheric lateralization, The endocrine system types and functions. Biological basis of Motivation: Hunger, Thirst, Sleep and Sex. Biological basis of emotion: The Limbic system. Biological basis of Memory. Hormonal regulation of behaviour. Methods of Physiological.

Psychology: Invasive methods – Anatomical methods, degeneration techniques, lesion techniques, chemical methods, microelectrode studies, Non-invasive methods – EEG, Scanning methods, Muscular and Glandular system: Genetics and behaviour: Chromosomal anomalies; Nature-Nurture controversy [Twin studies and adoption studies].

Section XH5.4: Perception, Learning, Memory and Forgetting

Sensation, sensory thresholds and sensory adaptations, Vision, hearing, touch and pain, smell and taste, kinesthesia and vestibular sense. Perception: Role of attention; organizing principles of perception, Gestalt perception, depth perception and illusions. Theories of learning: Classical conditioning, operant conditioning, social learning theory, cognitive learning. Memory: encoding, storage, retrieval, Information processing theories of memory, retrieval in

long term memory, reconstructive nature of long-term memory. Forgetting: encoding failure, interference theory, memory trace decay theory.

Section XH5.5:	Cognition
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Thinking, Intelligence and Language: Basic elements of thought: Concepts, Propositions, Imagery. Current paradigms of cognitive psychology: Information processing approach, ecological approach. Problem solving: Methods of problem solving, Strategies and obstacles, Role of Metacognitive processing. Decision-making: Choosing among alternatives, Intelligence: Theories of intelligence (Spearman; Thurstone; Jensen; Cattell; Gardner; Stenberg) and Emotional Intelligence; Measuring intelligence, Individual differences in Intelligence; Role of heredity and environment, Difference between Intelligence, Aptitude and Creativity.

Section XH5.6:	Personality
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Theories of personality: Psychoanalytic, Behaviourist, Social, Cognitive, Humanism, Trait and Type theories. Biology of personality. Assessment of personality.

Section XH5.7:	Motivation, Emotion and Stress and Coping
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Approaches to understanding motivation: Instinct, Drive-reduction, Arousal, Incentive, Humanistic, Achievement motivation, Intrinsic motivation, Aggression, Curiosity and Exploration. Emotions: Nature of emotions; Theories of emotions. Definition of stress, what are stressors, cognitive factors in stress. Factors in stress reaction: General adaptation syndrome, Effect of stress. Coping with stress: Problem-focused coping and Emotion-focused coping.

Section XH5.8:	Social Psychology
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Social perception: Attribution, Impression formation, Social categorization, Implicit personality theory. Social influence: Conformity, Compliance and obedience, Attitudes, Beliefs and Values. Evaluating the social world, Attitude formation, Attitude change and persuasion, Cognitive dissonance, Prejudice, Discrimination, Aggression, Power and prosocial behaviour, Belief systems and value patterns. Group dynamics, Theories of intergroup relations and conflicts.

Section XH5.9:	Development Across the Life Span
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Nature versus nurture in human development, Prenatal development: Chromosomes, Genes and DNA. Physical, cognitive and psychosocial development in infancy, childhood, adolescence and adulthood. Moral development. Theories of aging.

Section XH5.10:	Clinical Psychology and Organizational Behavior
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Psychological disorders, Conceptions of mental disorders, Assessment and diagnosis, DSM and Other tools. Psychotherapies: Psychodynamic, Phenomenological/Experiential therapy, Behaviour therapy, Cognitive therapy, Rational emotive behavior therapy (REBT), Meditation, Biological therapy. Organizational Behavior, Organizational demographic and cultural diversity, Organizational Culture, Making decisions in organization, Power and Politics, Leadership theories, Leadership styles and effectiveness, Positive organizational behavior, Performance management by reward and punishment

Section XH5.11:	Applications of Psychology
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Applications of theories of Motivation and Learning in School, Factors in educational achievement, Counselling and Guidance in Schools. Application of theories of motivation, learning, emotions, perceptions in Group dynamics and Organizational setup. Issues of Personal space, Crowding, and Territoriality. Intervention for Mental health and Wellbeing.