

Introduction to Psychology

What is Psychology?

PSYCHOLOGY	The science of behaviour and mental processes that seeks to describe and explain aspects of human thought feelings, perceptions and actions.
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What are the Goals of Psychology?

To describe, explain, predict, and control behaviour and mental processes

Describe: tell what occurred **Explain:** tells the why

Predict: under what conditions is the behaviour/event likely to occur

Control: how is the principle applied or what change in condition is necessary to prevent unwanted occurrence or to bring about a desired outcome

What is a Theory?

THEORY:	A theory is a systematic general principle or set of principles that explains how separate facts are related to one another
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* theories enable researchers to fit many facts into a larger framework

* a theory organizes facts, must predict new facts, permits a degree of control over phenomenon

BASIC and APPLIED RESEARCH

Basic Research:	research conducted for the purpose of advancing knowledge rather than for practical application (typically three goals: description, explanation, prediction)
Applied Research:	research for the purpose of solving practical problems (typically the fourth goal: to control behaviour)

DESCRIPTIVE RESEARCH METHODS

* research methods that yield descriptions of behaviour rather than causal explanations

- **Naturalistic Observation:** researchers observe and record behaviour without trying to influence or control it-subjects are not aware of observation
 - **Advantage:** study is in natural setting ; good descriptive; can provide hypothesis to be tested later

- **Disadvantage:** must wait for behaviour to occur, researcher has no control so cause and effect is difficult to determine-potential for observer bias, presence of researcher may influence situation
- **Laboratory Observation:** as above but in lab, researcher can exert more control(e.g. a sleep lab)
 - Advantage: more control
 - Disadvantage: observer bias potential; behaviour may be different than in natural setting
- **Case Study Method:** an in depth study of one or a few participants consisting of information gathered by observation, interview,or psychological testing to provide a description of behaviour or disorder
 - **Advantage:** advances knowledge especially in unusual conditions; can provide a hypothesis to be tested later
 - **Disadvantage:** cannot establish cause of observed behaviours; don't know if the cases studied generalize to larger population; may not be representative of condition, event;subject to misinterpretation by experimenter
- **Survey Research:** using interviews and/or questionnaires to gather information about aptitudes, beliefs, experiences or behaviours of a group (e.g. the incidence of drug use)
 - KEY Terms
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Population:	the entire group of interest to researcher and to which they wish to generalize findings; a group from which a sample is chosen
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Sample:	The portion of any population selected for study and from which generalizations are made about the population
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Representative sample:	a sample selected from the larger population in a way that important subgroups within the population are included in the same proportions as the larger population
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- **Questionnaire:** faster and less expensive than interview- a survey does not become more accurate based on more repondents- the survey can be generalized only if it is representative of the larger population (questionnaire in magazine does not represent Canadian population)
- **Interview:** skilled interviewer uses well-worded questions. Comfort level with interviewer is a factor; truthfulness can be affected by the interviewer's personal characteristics
- **ADVANTAGES SURVEY RESEARCH:** proper survey can provide accurate info about large number of people and show change in attitude/behaviour over time-but it is costly, time consuming, researcher needs expertise

- **DISADVANTAGE SURVEY RESEARCH:** respondents may lie or give faulty information because of memory or desire to please interviewer- may present self in a more positive light; sample may not be representative; character of interview may influence

THE EXPERIMENTAL METHOD:

THE EXPERIMENTAL METHOD:	the method where researchers randomly assign participants to groups and control all conditions other than the one or more independent variables which are then manipulated to determine their effect on some behaviour measured--the dependent variable in the experiment
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* purpose of experimental method is to determine causes of behaviour (e.g. what causes stress)

* an experiment is designed to test a hypothesis (a prediction about a cause-effect relationship between two or more variables) A variable is any condition/factor that can be manipulated, controlled, measured (e.g. one variable is how much you study, another is the grade you obtain)

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Independent Variable:	the factor or condition that researchers manipulate in order to determine its effect on an other behaviour or condition known as the dependent variable
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Dependent Variable:	the variable measured at the end of the experiment and that is presumed to vary as the result of manipulations of the independent variable
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Experimental Group:	in an experiment, the group of participants exposed to the independent variable or treatment
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Control Group:	a group that is similar to the experimental group and is expose to the same experiential environment but is NOT exposed to the independent variable; the group is used for comparison
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- **Methods to control** the experiment: control environment by using lab setting, vary only the independent variables

- **Do results generalize:** replicate, repeat using different populations or participants

- **POTENTIAL PROBLEMS IN EXPERIMENTAL RESEARCH**

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Selection bias:	assignment of participants to experimental or control groups such that differences among groups are present from the beginning; to avoid this experimenters use random assignment
Random Assignment	(assigning participants through chance, guaranteeing that all participants have an equal probability of being placed in any groups)

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Placebo Effect:	phenomenon that occurs when a person's response to a treatment is due to expectations regarding treatment rather than the treatment itself -Placebo is the substance given to control group to control -placebo effect (e.g. sugar pill)-subjects are unaware if they are in control group or experimental group
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Experimenter Bias:	when the researcher's preconceived ideas in some way influence the participants behaviour and/or the interpretation of experimental results-a self-fulfilling prophecy To eliminate experimental bias experimenters use Double-blind Technique
Double-blind Technique	(an experimental procedure where neither the participant nor the experimenter knows who is in the control group and who is in the experimental group until results have been gathered)

- **Advantage Experimental research:** ability to reveal cause and effect relationship, ruling out other factors
- **Disadvantage Experimental Research:** lab setting may inhibit natural behaviour; findings may not generalize to real world; potential for unethical or impossible experiment

OTHER RESEARCH METHODS

CORRELATIONAL METHODS (discovering relationships, not causes)

*when for ethical or practical reasons an experimental study cannot be performed to determine cause and effect, correlational method may be used

- * a positive correlation means when one variable increases the other increases
- * a negative correlation means when one increases the other is associated with a decrease (e.g. there is a negative correlation between number of cigarettes a person smokes and the number of years a person can expect to live) -variables that are not related: grade point average and height, and illness, and shoe size
- * the stronger the relationship between variables, the better the prediction
- * because two things vary together does not mean that one thing causes the other (e.g. stress and illness correlate; this doesn't mean stress causes illness; it may be that illness caused the stress or a third factor such as poverty, or poor general health increase susceptibility)

Correlational method:	a research method used to establish the relationship(correlation) between tow characteristics, events or behaviours
Correlational Coefficient:	a numerical value that indicates the strength and direction of the relationship between two variables; ranges from +1.00 (a perfect positive correlation) to -1.00 (a perfect negative correlation)
Reliability:	The ability of a test to yield nearly the same results when the same people are tested and retested using the same or alternate form of the test
Validity:	the ability of a test to measure what it is intended to measure

Participants in Psychological Research

*Human Participants: most studies in last 30 years have used college/university students
(because of convenience, pay, points to grade)-this is problematic-a select group

*Animal Participants: Pavlov's dogs, Skinners pigeons, white rat; animals still used in 7-8% of psy experiments; experimenters are bound by Code of ethics; animals used because a simpler model; researcher can exercise control; a wider range of medical and other manipulations and be used; can study the lifetime and multiple generations; inexpensive and available

Ethics in Research:participation must be voluntary, confidentiality, freedom to withdraw, deception can be used if it is only way, not a danger, participant is debriefed as soon as possible

HISTORICAL OVERVIEW OF PSYCHOLOGY

DARWIN introduced the idea that human behaviour a subject for study -humans evolved

1. WILHELM WUNDT and BRADFORD TITCHENER / STRUCTURALISM

WUNDT- in 1879 Germany first formal laboratory to find natural laws of human mind
-primary interest: perception -recorded in minute detail thoughts, feelings, heartbeat, respiration -Titchener was his student

TITCHENER-broke consciousness into three elements: physical sensations, feelings and images (memories)

STRUCTURALISM: The first school of psychology aimed at analyzing the basic elements, or structure of conscious mental experience through the use of introspection
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2. WILLIAM JAMES: FUNCTIONALISM

JAMES: 1st American Psychologist-physiology and philosophy-1875 he offered class in psychology at Harvard -minds constantly weaving associations, revising experience, jumping back and forth in time "consciousness flows in a conscious stream" -nervous system changed by experiences

FUNCTIONALISM	explores how an organism uses perceptual abilities to function in its environment
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3. FREUD (1856-1939) PSYCHODYNAMIC PSYCHOLOGY

FREUD-doctor/neurologist-unconscious desires and conflicts lie at bottom of symptoms-free will an illusion -motivated by unconscious instincts not available to conscious mind-psychoanalysis-the couch -personality develops in stages-need to resolve conflicts in early stages-Oedipus/controversial-still influential today -called psychodynamic theory

PSYCHODYNAMIC THEORY:	behaviour results from psychological factors the interact within the individual, often outside conscious awareness
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4. JOHN B. WATSON: BEHAVIOURISM

Watson argued that structuralism, functionalism and psychodynamic theories mental life a superstition (1913) -if you can't measure it can't study it -focus on observable,

measurable -behaviourism based on Pavlov studies that showed behaviour is learned response to stimuli in the environment-conditioning -Little Albert- infant "tabula rasa" "give me a dozen healthy infants..."

BF SKINNER: BEHAVIOURISM BF SKINNER became one of leaders of behaviourist school -added idea of reinforcement- rewarded subjects for behaving certain way-rat in cage with lever-reinforced with food when lever pressed -behaviourism dominated academic psychology until 60's

Behaviourism:	school of psychology that studies observable, measurable behaviour
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5. GESTALT PSYCHOLOGY

Max Wertheimer, Wolfgang Kohler, and Kurt Koffka in Germany this group attacking structuralism -interested in perception--why when we are flashed a series of pictures do they appear to move -gestalt means 'whole' or 'form' in German -tendency to see patterns , to distinguish object from background -paved way for study of perception

GESTALT PSYCHOLOGY-	studies how people perceive and experience objects as whole patterns
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6. EXISTENTIAL AND HUMANISTIC PSYCHOLOGY

-existentialist guides people towards a sense of inner identity allowing them to take responsibility for actions and achieve freedom - -closely related to existentialist- both insist people must learn how to realize human potential -humanist focuses on unity of mind, altered states of consciousness and 'letting go' -both not widely accepted in American psychology but relevant to personality and psychological disorders

EXISTENTIALIST PSYCHOLOGY	- focuses on the meaninglessness and alienation of modern life, and how these factors lead to apathy and psychological problems
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HUMANIST PSYCHOLOGY	-emphasizes nonverbal experience and altered states of consciousness as a means of realizing full human potential
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7. COGNITIVE PSYCHOLOGY

-one of newest since 60's -thinking, feeling, learning, remembering, making decisions -interest in how people process (perceive, interpret store, retrieve) --believe that mental processes can and should be studied scientifically- observe the behaviour - what we remember/recall

COGNITIVE PSYCHOLOGY:	devoted to study of mental processes in the broadest sense
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8. BIOLOGICAL/PHYSIOLOGICAL PSYCHOLOGY

-emphasis on biological processes and heredity to explain behaviour, study of brain and central nervous system

9. EVOLUTIONARY PSYCHOLOGY

-explores origins of behaviour and their adaptive value -study altruism, mate selection, jealousy in different species, cultures, times, compare male and female - cultural and gender differences

EVOLUTIONARY PSYCHOLOGY-	approach/subfield of psychology concerned with evolutionary origins of behaviour and mental processes, their adaptive value and the purposes they continue to serve
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10. MULTIPLE PERSPECTIVES

-contemporary psychologists less likely to advocate one idea and exclude others - fields still clash but without new evidence no advance