Chapter 9: Intelligence and Psychological Testing

- High intelligence is called genius and can be shown in both academics and athletics
- Differences in intelligence can be tied to social class and race and their assumed intelligence
- Intelligence can be linked to success but doesn't guarantee it; yet many see higher education as a pathway to success

Types of intelligence tests

Psychological test: standardized measure of a *sample* of a person's behaviour

- Used to measure individual diff. b/w people's abilities, interests, aptitudes, personalities etc.
- These tests sample behaviour but don't represent a person's total behaviour. As people have off days it's important to use caution when examining results
- Types: mental ability or personality tests
- *Mental ability tests*: 3 categories: intelligence (measures general mental ability and intellectual potential), aptitude (measures specific types of mental ability ex. verbal reasoning and numerical ability), achievement (measures a person's knowledge of various subjects)
- *Personality tests*: measure types of personality traits, motives, interests, values, and attitudes

Standardization and norms

- Psychological tests are standardized measures of behaviour
- Standardization: uniform procedures used in administering and scoring of a test (test should be same regardless of time or location; same instructions/questions/time limits etc)
- Test norm: indicates where a score on a test ranks in relation to other scores. Your own data doesn't mean anything unless it can be compared to other's scores (testing is relative). Comparing score against the norm helps you understand what it means
- Test norms are converted into a percentile
- Percentile scores show the % of people who score at or below the score you obtained (ex. 50th percentile = 50% of people who completed test scored below you)
- Standardization group: sample of people that test norms are based on (usually representative of overall population)

Reliability

- Reliability: measurement consistency of a test (can be estimated with test-retest reliability by comparing subjects' scores on 2 administrations of a test)
- Reliability estimates require the calculation of correlation coefficients (numerical index of the degree of a relationship between 2 variables). – 1 is strongest (good correlation), 0 – no correlation
    - With the test-retest situation, you have to correlate both tests. The closer they are to +1, the more reliable the result is
- As reliability goes down, concern for measurement error increases

Validity

- The ability of a test to measure what it was designed to measure
- Used to refer to the accuracy/usefulness of the inference/decisions made based on a test. So, a specific test may be valid for one purpose but not another (ex. IQ is good for school achievement but not for future job success)
- Types: content, criterion-related, construct
- *Content* (needed for classroom tests): degree to which the content of a test is representative of the domain it's supposed to cover (ex. psychology exam that has questions related to material from other textbooks). Evaluated with logic.
- *Criterion related* (needed to predict performance): estimated by correlating subjects' scores on a test with their scores on an independent criterion (another measure) of the trait

assessed by the test. Ex. a test developed to measure a person's aptitude for becoming a pilot could be matched to the person's performance in pilot training (person with high aptitude should have high perf.)

- *Construct* (needed to test hypothetical constructs): many tests measure abstract qualities like independence and intelligence (hypothetical constructs). The extent to which there is evidence that a test measures a particular hypothetical construct. To assess construct validity, you have to examine the correlation b/w the test and various measures *related* to the trait in question. Ex. if you wanted to test extraversion, you can also test introversion, social discomfort, sociability, self-acceptance etc. The type of relationship between all these variables would show evidence of construct validity

History of intelligence tests

Sir Francis Galton

- 19th Century: Studied family trees and saw that success appeared consistently in some families. Concluded that intelligence is passed on through generations due to genetics (discounted other factors like wealth/class etc. –families he studied were upper class w. access to education)
- To test his theory, he needed to measure intelligence objectively. He assumed the mind is built out of sensations and intelligent people would have high sensory acuity. He subjected people to high-pitched sounds, reaction time tests and colour perception tests but had little success relating these results to a person's mental ability and future success
- Results: coined term "nature vs nurture" (for any given trait, how much is genetically influenced vs. how much is environmentally influenced), invented correlation and percentile test scores.

Alfred Binet

- 1904: French commission asked him to create a test identifying mentally slow children so they could be offered special education (to avoid possibly biased reliance on teacher evaluations)
- 1905: Published Binet - Simon scale testing more abstract reasoning. Successful because it was inexpensive, easy to administer, objective and good at predicting school performance
- Expressed a score in terms of "mental age" (child displays mental ability of typical child at that chronological age)

Terman and the Stanford-Binet

- 1916: Published Stanford-Binet Intelligence Scale incorporating a new scoring scheme based on the 'intelligence quotient' [(child's mental age) ÷ (chronological age) x 100]
- Ratio allows for the comparison of children of different ages. All children were placed on a scale of 100 (when mental age = chronological age, then IQ = 100)
- Became the standard onto which all other intelligence tests were compared.

David Wechsler

- Chief psychologist at NY Bellevue hospital. Wanted a better way than Stanford-Binet test to better assess adult patients
- 1939: Published the Wechsler Adult Intelligence Scale for adults and one for children later too
- 2 innovations: (1) Test was less dependent on verbal ability and had separate scores for verbal IQ, non-verbal IQ and total IQ, (2) Discarded the intelligence quotient and Invented a new scoring method based on the normal distribution

Testing today

- IQ tests can be administered individually (by a psychologist who has special training – Stanford binet or Weschler) or in groups (Otis-Lennon School Ability Test, Cognitive Abilities test)

- Now, IQ and intelligence tests are based on normal dist. not intelligence quotient

Basic Questions about Intelligence Testing

- Questions on IQ tests depend on whether test is for children vs. adults or individuals vs. groups
- Examinees have to manipulate words, #'s, images and/or objects through abstract reasoning.
- Tests are scored based on the normal distribution and standard deviation
  - The normal distribution is a symmetric, bell-like curve that represents the pattern in which many characteristic are dispersed in the population
  - So, most cases are centered around avg., and decrease as you move away from center.
- Raw scores on intelligence tests are translated to deviation scores (locate where subjects fall in normal distribution using stand. dev. to show how far you deviate in either direction from avg.)
- In general, the mean is set to 100, and one standard deviation is 15. So, two standard deviations above the mean, would give an IQ of 130 (130 units of intelligence)
- Deviation IQ scores can be converted to percentile scores too

Potential vs. Knowledge

- Intelligence tests are designed to measure intellectual potential not knowledge
- However, tests do contain items that are influenced by previous learning/knowledge
- So, IQ tests measure a blend of potential and knowledge even though test developers try to tilt IQ tests towards potential

Reliability and Validity

- IQ tests are very reliable and have correlations of 0.9. But they may yield unrepresentative scores because: they *sample* behaviour and people may be influenced by factors like high anxiety and low motivation
- IQ tests are valid in testing intelligence related to academic work (to predict school performance). Correlation b/w school grades and IQ score is ~0.4 to 0.5 (as high as you would expect given other influences: motivation, diligence, personality, teachers biases, etc.)
- However, these are co-related because although IQ predicts success in school, schooling has a positive effect on IQ
- BUT, IQ tests do not test social competence, practical problem solving, creativity, mechanical ingenuity, or artistic talent
- 1981: Sternberg found people intelligent behaviour fell into 3 categories: (1) verbal (speaks clearly/fluently, knowledgeable about a field, can read), (2) practical (makes good decisions, sees all aspects of a problem, poses problems in an optimal way), (3) social (accepts others, has social conscience, thinks before speaking, is sensitive to people's needs)
- IQ tests generally only measure success in verbal intelligence

IQ Tests and Job Success

- Researchers tried to find relationships b/w IQ tests and vocational success by comparing IQ and factors related to vocational success (income, status of occupation, job performance)
- Found people who scored higher on IQ tests are more likely to get high status jobs because IQ is related to school performance which is important in obtaining certain occupations. But correlation was only 0.37 so there are exceptions with regards to hard work, determination etc
- With income, correlation was low (0.21 – 0.3) so intelligence fosters vocational success but doesn't ensure it

- Within an occupation, IQ scores correlate to job performance by 0.50, this correlation varies but still exists even in low-level jobs, correlation exists regardless of experience and measures of specific mental abilities/personality don't correlate to job performance as strongly as IQ score
- But, a correlation of 0.50 is modest and only accounts for approx 25% of the variance in job performance.

IQ Tests in Other Cultures

- IQ tests are popular in Western countries but not in other countries (China/India)
- Minorities usually score lower on IQ tests because western tests don't translate well into other languages and cognitive frameworks
- IQ tests are only valid for the cultural group which it was initially designed for because quantifying information procession/decision making can be strange for cultures. Also, cultures value intelligence/mental skills differently

Extremes of Intelligence

- IQ cut offs: if you're less than 2 stand. dev. from mean (IQ < 70) you're considered to have an intellectual disability. If you're above 2 stand. dev. from mean (IQ > 130) you're gifted

Intellectual Disability (mental retardation)

- Subnormal general mental ability accompanied by deficiencies in adaptive skills (communication, self-care, social interaction, health/safety etc.) developed before age 18
- Use adaptive skills to help measure intellectual disability since it shouldn't be solely based on IQ.
- Cut off for disability is b/w 70 – 75. Although this doesn't seem like a big diff., having the cut off at 75 instead of 70 would mean the # of people who qualify for special education would double.
- Prevalence of mental retardation is b/w 1 – 3% (even though it should be more around 4.5)
- 4 levels of retardation:
    - Mild: IQ from 50-70, educated up to gr.6, can live normally in stable environment with minimal stress
    - Moderate: IQ from 36-50, educated up to gr. 2-4, can live in a semi independent environment with no stress
    - Severe: IQ from 20-35, limited speech and bathroom abilities, can help with self care under supervision
    - Profound: IQ below 20, little or no speech and can't be trained, needs total care
- 85% of retarded people are diagnosed as 'mild' (15% have obvious deficiencies) and 2/3 of these people are no longer disabled when tested as adults (some attend college/university)

Origins of Intellectual Disability

- Most disabilities are caused by organic/genetic conditions: Down syndrome (mild to severe retardation from carrying an extra chromosome), Fragile X Syndrome (inherited in FRM1 gene), Phenylketonuria (metabolic disorder from an inherited enzyme deficiency – must be treated early), Hydrocephaly (destroys brain tissue from excess cerebrospinal fluid)
- But, 50% of disabilities have no identifiable organic cause; fromsubtle, hard to detect physiological defects or an unfavourable environment (low SES family, parent neglect/instability, malnutrition, no education/healthcare

Giftedness

- Hard to define giftedness. Experts say giftedness shouldn't be equated with high intelligence or IQ scores (doesn't incorporate other forms ex. leadership, arts, creativity etc.)
- But, identifying gifted children is usually done through IQ tests (top 2-3% with IQ > 130)
- Gifted kids are stereotyped as nerdy/socially awkward/sickly but this isn't true

- Lewis Terman did a study with 1500 children with an IQ of ~150. He found they had above average height, weight, strength, physical/mental health, emotional adjustment and social maturity. As adults they continued to have superior health, emotional stability and social satisfaction
- But, Ellen Winner suggests that moderately gifted (130-150) people are extremely different from profoundly gifted (IQ > 180) people who are generally introverted, isolated and have many emotional problems/rates of mental illness
- So, the psychological adjustment of gifted individuals depends on their level of giftedness

Giftedness and achievement

- Children in Terman's study were successful but didn't achieve genius level contributions
- 2 types of giftedness: (1) High IQ children who do well in school, (2) adults who make major contributions to their fields (involves a much higher level of giftedness)
- Higher giftedness depends on 3 factors: high intelligence, high creativity and high motivation, so intelligence alone doesn't mean you'll be eminent (make big contribution)
- Also, some gifted children don't do well in school (ex. because they are a minority) so they aren't give the same opps as others
- Big debate on whether major achievements are due to innate talent or intensive training/work
- "Drudge Theory" of exceptional achievement: eminence depends on endless, tedious practice and outstanding mentoring and training
- Most believe that you need both talent and intensive training for eminence

Heredity and Environment as Determinants of Intelligence

- Early pioneers of IQ felt intelligence was given by nature (genetic and inherited) but it's affected by both genetics (nature) and the environment (nurture)
- Nature researchers downplay special education/prgms for underprivileged with belief that intelligence can't be changed because genes can't be changed
- Nurture researchers feel more funds should be allocated for special education programs/financial aid; this debate greatly affects social policies

Nature argument – hereditary influence

- Observation that intelligence 'runs in the family' is accurate but families share both genes and the same environment.

Twin studies

- Provide evidence on influence of genes on intelligence
- Twins grow up in the same environment but identical twins have very similar genes while fraternal twins have closely related genes - if theory was true, identical twins should be more similar in intelligence level
- Correlation of IQ among identical twins was 0.86 while correlation among fraternal was 0.6 supporting the idea that IQ is inherited.
- Some try to disprove this by saying identical twins are treated more similarly (environment influence) because they're the same gender. But, identical twins raised apart from each other still have a higher similarity in IQ (0.72 correlation) compared to fraternal reared together (0.6)
- Also, the gap between twins reared apart and fraternal twins reared together gets bigger with age suggesting that the influence of nature on intelligence increases with time

Adoption studies

- Adopted children show more similarity in IQ to their biological than adopted parents helping prove that nature has more influence on intelligence

Heritability Ratio

- Heritability ratio: estimate of the proportion of trait variability in a population determined by variations in genetic inheritance; ex. hereditability for height is 90%
- For intelligence, hereditability varies widely; can be as high as 80% but is usually accepted around 50% (intelligence is 50% related to genes and 50% related to environment)
- Limitations of estimate: it is a group statistic so it can't be applied meaningfully to individuals, hereditability may vary b/w groups in relation to environmental factors. Right now most studies have been done about white middle class men so the estimate can only be applied to people in this group. Also, these estimates are sample specific and don't represent fixed/constant value

<u>Nurture argument</u>

Adoption studies

- Provide evidence showing that environmental factors influence intelligence because: adopted children show some similarities to their adoptive parents' in IQ, siblings and even twins reared together have more similar IQ's than those reared apart, unrelated children raised in the same house show similarities in IQ

Environmental enrichment/deprivation

- "Cumulative deprivation hypothesis": children raised in substandard environments have a gradual decline of IQ and children who are removed from the substandard environment have IQ scores that gradually increase –proved true
- Improved environments lead to increased IQ for adoptees, compared to those not adopted or placed in disadvantaged homes

Generational changes – "Flynn effect"

- Performance on IQ tests has steadily increased over generations
- Tests are re-normed periodically with new standardization groups, centering at 100.
- But, IQ has been increasing steadily since the 1930's (IQ of 100 today would be equal to 120 in 1930) which is perplexing because gene pool couldn't have changed in 70 years so it must be related to environmental factors

<u>Interaction of heredity in the environment</u>

- Both nature and nurture influence IQ so experts are now studying how they interact
- Sandra Scarr stated that heredity sets limits on intelligence (called a reaction range – genetically determined limits on traits) and environmental factors determine where individuals fall within these limits
- So, children reared in high quality environments should score near the top of their IQ range and children reared in low quality environments should score near the bottom of their IQ range
- Helps explain why some children in nice environments have low IQ's and some children in bad environments have high IQ's
- Scientists are now trying to identify genes that influence mental ability to understand how heredity influences intelligence but progress is slow because there are small parts on 00's of genes that influence intelligence

<u>Cultural differences and IQ Scores</u>

- IQ scores of ethnic and racial minorities are generally lower than the avg. whites; debate on whether this is due to genetic or environmental factors

Hereditability (genetic influence)

- Arthur Jensen argued the hereditability of intelligence was 80% so intelligence is largely genetic in origin and genetics are the cause of ethnic differences in intelligence
- After, Richard Herrnstein & Charles Murray wrote the book "The Bell Curve" re-enforcing that intellectual ability is inherited, and determines success in life. Also stated that ethnic and cultural differences in IQ are substantial and not easy to reduce. Implicit message

throughout the book that disadvantages groups cannot avoid fate due to heredity. Not well received. They published their findings in a book, rather than a peer-reviewed journal so it wouldn't be under the scrutiny of the scientific community

- J. Phillipe Rushton argued that races could be ranked in terms of inherited intelligence, social behaviour and physical attributes. Stated that Asians were the most intelligent, most law-abiding, hardest working, least sexually promiscuous and largest brain size. Blacks rank opposite, with whites in the middle. His views were condemned b/c of social harm, and sloppy science, reasoning and inaccuracies. His theory dealt with the collection of racial differences but didn't say anything about any origins or causes of such differences.
- Overall, heritability explanations for ethnic differences in IQ are flawed. Usually differences within the same ethnic group are attributed to genetics, and differences seen among ethnic groups are attributed to environmental factors – but, it's hard to tell (we aren't even sure of the heritability estimate of IQ in groups other than in white subjects)

SES (Socio-economic Status) Explanation

- Minority students have lower IQ's because they have a lower SES (grow up in deprived environment) while whites have higher IQ's because they are raised in better conditions
- Ex. In comparison to middle and upper-class families, minorities grow up in: (1) larger families which limits parental attention, (2) have less books and learning supplies, (3) less privacy, less parental assistance, (4) poorer role models, (5) less pressure to work on intellectual purists, (6) attend poorer quality schools, (7) grow up in crime, drug or gang infested communities, (8) suffer from malnutrition and environmental toxins
- In gen'l, kids in low SES families score 15 pts below avg. than children from high SES families.
- Since minorities are over-represented in low SES families, IQ diff. is more linked to social class

Racial Stereotype Vulnerability Explanation

- Derogatory stereotypes of a group's intelligence can cause members of the group to feel vulnerable in a school setting (called "stereotype vulnerability"). These –ve stereotypes can also cause groups to feel like they don't belong which leads to decreased performance in school
- Since minority groups are aware of -ve stereotypes, if they do poorly on IQ test, people may think it's because of their race/ethnicity. But, if they do well, people are suspicious and question the test/your methods (same thing happens to women when they take on traditional male roles)
- This stereotyping can lead to academic underachievement by: (1) undermining emotion investment in academic work (people don't believe a certain minority group can do well in school so the members of the group lose motivation which causes their performance to suffer), (2) increasing anxiety during IQ test. When taking IQ test, groups are extra aware of stereotype so they have increased stress (interferes with prefrontal brain processing), constantly monitor their performance and try to suppress –ve emotions (all these –vely affect performance)

Cultural Bias on IQ Tests Explanation

- IQ tests draw on knowledge and experience, and use language and vocabulary, that reflect white, middle-class (mainly made by white middle class psychologists)
- Research suggests that the IQ differences are due to differences in *exposure to* information (different cultures are exposed to difft information so IQ differences reflect differences of "knowledge" rather than of "ability")
- But, other research shows this to be a weak and inconsistent implication so debate continues

Current and Future Trends

Increasing Emphasis on Specific Mental Abilities

- Now there's more emphasis on testing specific mental abilities vs. gen'l mental ability
- Started with **Charles Spearman**. Spearman studied the structure of intellect and found that specific mental abilities were highly correlated. Called "factor analysis": correlations among different variables are analyzed to identify closely related clusters of variables.
- Conclusion: all cognitive abilities share an important core factor, *g (general mental ability)* so although people can have special abilities, they are all largely influenced by *g*
- **L. L. Thurstone** felt Spearmen placed too much emphasis on *g* so instead he broke intelligence into 7 distinct "primary mental abilities": word fluency, verbal comprehension, spatial ability, perceptual speed, numerical ability, inductive reasoning, memory
- **J. P. Guilforfd** followed by further dividing intellig. into 150 sep. abilities and got rid of *g*
- Other approach by Raymond Castell + John Horn broke intelligence into fluid/crystallized parts. Fluid related to reasoning ability, memory capacity and speed of info processing. Crystallized related to ability to apply acquired knowledge and skills in problem solving. This influenced the Stanford Binet test as it's now broken into 15 subtests to analyze more specific mental abilities

Biological Indexes of Intelligence

- To remove cultural bias in IQ testing, Jensen and Eysneck tried to develop a 'culture free' measure of intelligence related to testing sensory processes
- Jensen tested reaction time and found that those with faster reaction times had higher IQ's but the correlation was small at only 0.2-0.3. However, it was found that the correlation was higher when the reaction time test was more complex. This has influenced IQ tests because they normally have a demanding time limit relating to the idea that 'fast is smart' (those with greater mental speed have greater IQ – but correlation is too small to prove this)
- Another approach to testing mental speed is through inspection time (how long it takes people to accurately judge something – higher correlation of 0.3-0.4 with this and IQ)
- Lastly, brain size is also being looked at as a measure of intelligence. But, the correlation between brain volume, measured through MRI scans, and IQ scores is modest (0.35). Also, it's been seen that better environments produce heavier brains (this means that having more education could be the reason for the larger brain size)

Relation to health

- Studies suggest that smarter people live longer
- Linda Gottfredson suggests that health self-care is complicated, life-long and mentally challenging and more intelligent people are better prepared
- Another factor is that high SES is correlated with higher IQ (High SES = more access to better health care and better health outcomes)

Cognitive Perspective

- Intelligence is usually assessed using the "testing perspective" which measures the **amount** of intelligence people have
- Cognitive Perspective examines how people **use** their intelligence and process info
- Cognitive perspective was developed by Robert Sternberg. Created the Triadic Theory of Human Intelligence, which consists of 3 parts:
    - Contextual: intelligence is culturally defined so difft parts of intelligent behaviour are valued differently based on culture. Ex. hunting isn't intelligent here, but may be in another culture
    - Experiential: Deals with one's ability to deal with novelty (new tasks/roles) and ability to complete familiar tasks automatically/effortlessly

    - Componential: intelligent thinking depends on metacomponents (control, monitor and evaluate cognitive processing), performance components (execute strategies assembled by metacompnents) and knowledge-Acquisition components (encore, combine & compare information)
- Cognitive perspective shows that more intelligent people spend more time planning for success so IQ tests place too much importance on mental speed capabilities
- Sternberg created 3 facets of successful intelligence: (1) analytical (reasoning, evaluation, judgment), (2) creative Intelligence (generating new ideas, inventing new things), (3) practical Intelligence (learning how to live in current environment and deal with everyday problems)
- Studies show all facets can be measured reliably, are independent and aid the prediction of "real world" intelligence

Expanding intelligence

- Many theorists think the concept of intelligence is too narrow and should sample more tasks
- Howard Gardner argues that IQ tests emphasize verbal and mathematic skills but there are many more "Human intelligences": Logical-mathematical (scientist, mathematician), Linguistic (poet, journalist), Musical (composer, violinist), Spatial (navigator, sculptor), Bodily-kinesthetic (dancer, athlete), Interpersonal (therapist, salesperson), Intrapersonal (someone with detailed accurate self-knowledge), Naturalist (biologist)
- But some critics argue his def. of intellig. is too broad and just describes difft human abilities

Emotional intelligence

- The ability to perceive and express emotion, assimilate emotion in thought (how emotions affect decisions, thinking, affect stress), understand/reason with emotion and regulate emotion
- Many EI tests developed (ex. Multifactor EI test)
- Research suggests that EI may be important in determining people's success in difficult transitional phases in life (e.g., moving from high school to university)
- NHL players scored higher on EI compared to the general population as they have to be able to control and regulate their emotion
- Critics argue that sophistication about emotion ≠ intelligence

Creativity

- Creativity: generating ideas that are original, novel, useful and adaptive (appropriate sol'n to problem in certain situation)
- Evidence suggests that most creative ideas are logical extensions of existing ideas involving a lot of hard work/small faltering steps (usually not 'flashes of genius').
- Also, creativity emerges from normal problem solving efforts that depend on conscious thought processes (reports of ideas coming from dreams are few or have usually been made up)
- Some believe people need to think outside the box to be creative and exhibit divergent thinking (expanding the range of alternatives by creating many possible soln's) vs. convergent thinking (narrow down alternatives to find a specific answer); studies show divergent thinking may help with creativity but is not dependent on it

Measuring Creativity

- Tests measuring creativity usually measure divergent thinking by giving a person a problem and asking them to generate as many alternatives as they can in a short period of time. Score is based on the # of alternatives, originality and usefulness of alternatives

- Ex. Remote Associations Test: based on the assumption that creative people see unusual relationships and make non-obvious connections. Participants have to figure out the obscure relationships between two words (ex. ROUGH, RESISTANCE, BEER? → DRAFT)
- Tests are poor predictors of actual creativity because people are usually only creative in a specific field they have training in. But, tests measure creativity in a gen'l sense → not effective
- Creative achievement depends on numerous factors such as motivation, personality, intelligence, training, mentoring, good fortune. Motivation is really important because people have to work hard for their ideas and live through obstacles/set backs. So, creative people often have to make a choice to defy conventional thinking and continue w. ideas

Correlates of Creativity

- With relation to personality, creative people usually think for themselves and are less influenced by the opinions of others. Traits include: autonomous, introverted, open to new experiences, norm-doubting, self-confident, self-accepting, driving, ambitious, hostile and impulsive
- With relation to intelligence there are weak correlations but creative achievement requires a min. level of intelligence so most creative people are probably above average in intelligence

Creativity and mental illness

- Many creative geniuses have suffered from psychological disorders
- Research suggests a correlation between creative genius and maladjustment (ex. mood disorders (e.g., depression))
- But, they're probably not casually related. Certain cognitive styles may foster creativity and predispose people to psychological disorders. Or elevated pathology may reflect difficulty and frustration to get work accepted, and receive little public support

Chapter 10 – Motivation

Motivational Theories and Concepts

- Motives: needs, wants, interests and desires that propel people certain directions
- Motivation involves goal-directed behaviour (goals should be defined and coherent)
- Goals are necessary for success (ex. street kids have little motivation to reach or set goals and their lives become aimless)

Drive theory

- Motivational forces are considered to be drives or driving forces
- Clark Hull explored motivation fully. His theories were based on the idea of homeostasis, a state of physiological equ'm/stability (body maintains homeostasis temp of 37 by shivering/sweating)
- Drive: internal state of tension that motivates people to act in a way that will reduce this tension
- So, when individuals experience a drive (ex. hunger) they're motivated to pursue actions that will lead to drive reduction (ex. get food) to restore physiological eq'm
- Drive theories can't explain all motivation since they're focused on people removing internal tension (ex. homeostasis is irrelevant to some motives like knowledge, motivation may arise from arousal – if you pass by DQ and want ice cream when you're not hungry)

Incentive theory

- External stimuli regulates motivation
- Incentive: an external goal that can motivate behaviour (ex. money, A+ exam, social approval)
- Some of these incentives may reduce drives but others might not
- Drive and incentive theories are contrasted as push and pull. Drive theory emphasizes how internal states of tension push people to action (motivation is within person). Incentive theory emphasizes how external stimuli pulls people to action (motivation is outside person)
- Incentive theory emphasizes enviro. influence and downplays biological basis of motivation
- But people can't always get what they want (incentive) which led to creation of expectancy – value model. This states a person's motivation depends on (1) expectancy about your chances of attaining incentive, (2) value of the desired incentive

Evolutionary theory

- Motivation is from evolution and natural selection favours behaviours that maximizes reproductive success (ex. Affiliation, achievement, dominance, aggression, sex-drive)

- Ex. dominance is greater in men than women b/c it benefited males reproductive success (females like dominant males, dom. males can poach females from subordinate males, etc.)

Types of motives

- Theories distinguish b/w biological motives (originate in body needs; ex. hunger) and social motives (originate in social experiences; ex. achievement)
- People have limited biological needs that are the same for everyone and needed for survival
- People can acquire unlimited social motives which vary by experience, learning and socialization

Motivation of hunger and eating

Biological factors in regulation of hunger

- Walter cannon noticed that when people were hungry their stomachs would contract/rumble; so he concluded that stomach contractions cause hunger. But even when people had their stomach's removed they were still hungry – so this theory was wrong

Brain regulation:

- Animal studies suggested that hunger was controlled by the brain in 2 centres located in the hypothalamus (tiny structure involved in regulating basic biological needs related to survival). When one area called the lateral hypothalamus was destroyed, animals showed little interest in eating (as if hunger center was turned off; considered as the 'start eating' center). When the ventromedial nucleus was destroyed, animals ate excessively (couldn't recognize when they were full – thought of as "stop eating center")
- Now, thinking is that the lateral and ventromedial areas are elements that regulate hunger but don't turn it on/off. Scientists think the paraventricular nucleus plays a larger role in regulating "specific hungers" and look at neural circuits in regulating hunger not anatomical centres. Also a current interest in Ghrelin (neurotransmitter in nervous system and 'hunger' hormone in endocrine system → studies show increased ghrelin = increased food intake/craving)

Glucose and Digestive regulation

- Most food is converted into glucose (simple sugar that provides energy). Studies show when there is less glucose in blood, people feel hungry. When there is more, people feel full
- Jean Mayer proposed hunger is regulated by rise/fall of blood glucose levels and created "Glucostatic Theory": fluctuations of blood glucose level are monitored by glucostats (neurons sensitive to glucose in surrounding fluid). But glucose levels don't fluctuate too much or quickly so this theory was considered a contributing factor to hunger but not the determinant
- Also found stomach may influence hunger. After eating, cells in the stomach can send signals to the brain to stop further eating (ex. vagus nerve)

Hormone regulation

- Insulin is a hormone secreted by the pancreas that helps cells extract glucose from blood
- Secretion of insulin is associated with hunger. It was found that the sight/smell of food can cause this secretion which may contribute to increased hunger
- Scientists also discovered a new hormone called leptin (produced by fat cells → people with more fat have more leptin). Leptin circulates in blood stream giving body information about fat stores. When leptin levels are high, there is decreased hunger

Environmental factors in regulation of hunger

Food availability and related cues

- Theories argue that people are motivated to eat in anticipation of pleasure (incentive)
- So, hunger is influenced by food availability and tastiness.

- Sensory-specific satiety states that as you eat a specific food its incentive value declines. So with fewer foods the appeal of food declines quickly. But with many foods are available, you can shift foods and eat more (generally why people overeat at buffets)
- Hunger can also be triggered by exposure to cues (Pictures, written or video descriptions)
- Also, eating is usually social so others' behaviors can influence our food intake; ex. usually the presence of others stops eating but in some cases it causes our eating to increase

Learned preferences/habits

- Food preferences are acquired through learning which can be seen through different cultures having very different patterns of food consumption
- We have some natural preferences (like sweet things from birth, salty things at 4 mnths etc)
- We also learn to avoid foods based on how they make us feel (ex. foods may cause nausea)
- Preferences are also influenced by observation (children are more likely to try something if their parents eat it, repeat exposures lead to increased liking)

Stress

- Stress leads to increased eating for most people (especially in chronic dieters)
- Stress causes psychological arousal/negative emotions which may lead people to eat more; usually eat good food to try and feel better (not effective though as it doesn't lead to lasting mood changes)

<u>Eating and Weight</u>

Roots of Obesity

- Obesity: condition of being overweight determined by body mass index (BMI) which is an individual's weight (kg) / height (m^2)
  - BMI: >30 = obese, 25-29.9 = overweight
- Obesity rates have doubled in the last 20 yrs which is concerning because obesity lowers life expectancy and makes people vulnerable to heart disease, diabetes, hypertension, stroke, arthritis, cancer etc.
- *Evolutionary*: Before we lived in environments with fierce competition for limited food. Since starving was a threat, we would consume more food than needed and store excess calories as fat to prepare for future shortages. Today, we have an abundant supply of tasty, high calorie foods and our evolved tendency to overeat when there is a lot of food around causes us to consume more than we need. Overeating has led to a large trend in dieting to lose weight
- *Genetic predisposition*: People may have a genetic vulnerability to obesity. Study showed adults raised by adoptive parents were more similar in BMI to genetic parents. Shown that genetic factors account for 61% variation in weight among men and 73% in women
- *Excessive eating/inadequate exercise*: people are overweight because they eat more than they exercise. This can be linked to increasingly available tasty/high caloric food (in schools, airports, restaurants etc.) and modern conveniences which limit physical activity (cars, elevators)
- *Set Point Theory*: The body monitors fat-cell levels/weight to try and keep them at a stable level. When fat stores fall below a set point, the body begins to compensate by increased hunger and decreased metabolism causing people who lose weight tend to gain it back (doubtful though).
- *Settling Point* Theory: weight drifts around the level at which the factors that determine food consumption/energy expenditure reach an eq'm. So, weight stays constant if there are no lasting changes to alter it.
- *Dietary restraint*: chronic dieters are 'restrained eaters' and work hard to control eating impulses/feel guilty when they fail. So, if they break their diet, they over eat in excess and binge since the day is already 'ruined.' Restrained eaters prepare for diets by overeating.

- *Eating disorders*: Anorexia nervosa (disorder where young women starve themselves), bulimia nervosa (disorder where women alternate b/w binge eating and then purging), activity anorexia (severe dieting and excessive exercise that creates a biochemical process resulting in starvation)

Sexual Motivation

- Sex is seen everywhere (TV shows, ads, movies, magazines etc.)
- Hard to study because people who fill out surveys/talk about it are gen'lly more open than those who don't which may bias research results

Determinants of sexual desire

- Sex is needed for the survival of species but not individuals.
- Children experiment w/ sex when they enter their teens (28% of 15-17 year olds, 80% of 20-24)
- Many don't practice safe sex
- *Hormonal regulation*: hormones secreted by gonads (ovaries/testes) and regulated by hypothalamus/pituitary gland influence sexual motivation. Estrogen is principal hormone in females and androgen is principle hormone in males. Effects of hormones can be seen in animals – females are only sexually reproductive b/ ovulation (when there's an inc. in estrogen), males lacking androgen when testes are removed lack sexual desire. In humans, hormones have less of an effect in sexual desire but may still have a slight impact. (ex. in male sex offenders, lower testosterone decreases sexual interest; in both males + females more testosterone = higher rate of sexual activity)

Evolutionary analysis of human sexual behaviour

- Sex is necessary for reproductive success and is the basis for natural selection
- Robert Triver dvlpd Parental Investment Theory stating: the sex that makes the smaller investment will compete for mating opportunities with the sex that makes the larger investment. The sex that makes the larger investment is more discriminating in selecting a mate
- Relation to humans: males only invest a little in the production of offspring and are only required in the act of copulation so they maximize their reproductive potential by mating with as many females as possible. Alternatively, females have to invest 9 mths and additional years for nourishing (breastfeeding) children so there is a limit to how many they can have. Therefore, there is little incentive to mate with many males. Thus, females maximize reproductive success by selecting few males. In this way, males are thought to compete for the scarce and valuable 'commodity' of reproductive opportunities
- Provides reasoning for why men have: more interest in sexual activity, more desire for sexual partners, more willingness to engage in uncommitted sex. Also reasons for why females are more: conservative/discriminating in choosing partners, seek partners that have the greatest ability to aid in feeding/caring for offspring (ex. strong/agile men can find food, defend shelter)

Gender differences in patterns of sexual activity

- Males generally show a greater interest in sex (think about it more often, initiate more frequently, more interested in sex for its own sake, greater liking of pornography)
- Men more motivated to pursue sex with a variety of partners; over their lifespan, men would like to have 18 partners whereas women would want only 5 partners
- Men more likely to report that they would have sex with someone they had known for only a brief period
- Overall, men have increased: frequency and intensity of sexual desires, frequency and variety of sexual fantasies, desire for a number of partners, masturbation, liking of various sexual practices

- But evidence suggests this may be exaggerated b/c evidence is based on what subjects say. Also may be b/c women want to downplay their desire to avoid appearing slutty/easy

Gender Differences in Mate Preferences

- Long term commitments have become a normal thing in society. Although men generally show little interest in long term commitment (by evolutionary theory) females demand it as a part of consenting to sex (due to child rearing)
- Females/males want different things in mates (subconscious preferences hard wired into brain):
    - Males: should look for females with good reproductive potential who are sexually faithful and good at child rearing → look for youthfulness (more reproductive years) and attractiveness (symbol of health/fertility)
    - Females: should look for males who can provide material resources, protect the family, are dependable and willing to invest resources in family → look for intelligence, ambition, income and social status
- Research shows that universally (in 1st, 2nd, 3rd world countries that are socialist/democratic etc.) women place higher value on status/ambition/income and men place higher value on attractiveness/youthfulness
- Recent studies showed higher income men were found to have had more sex and that women also pay attn to a man's willingness to invest in children (found to be more attractive)

Criticisms

- Evolutionary theory makes humans seem bad (men look like sexual predators, women like greedy materialists)
- Alternate explanations: women's emphasis on material resources may be b/c their own economic potential was limited b/c of discrimination. Women's decreased sexual motivation could be b/c many cultures/religions try to suppress female sexuality

Pornography

- The internet has made porn readily available and has been shown to stimulate sexual desire
- Men are more likely than females to find erotic materials enjoyable (may be b/c porn is scripted and portray women in degrading roles)
- Usually exposure to porn inc. the likelihood of sexual activity for a period of hours afterward
- But, there's no correlation b/w the availability of pornography and rates of sex crimes. Sex offenders don't seem to have earlier/more extensive exposure in childhood or adolescence. So, porn seems to play a minor role in the commission of sexual offences
- But, porn may alter attitudes in: leading to more liberal attitudes about sex (ex. viewed pre-marital sex as more acceptable), leading to less satisfaction with their partners appearance, sexual curiosity and performance (may create unrealistic expectations)
- Aggressive pornography (shows women gradually giving into/enjoying rape) is concerning and supports the myth that women liked to be forced to have sex/raped. Men who believe this are more likely to commit sexual assault
- Worrying in terms of frequency of rape which hasn't changed despite reduction efforts (est. show ¼ young women may be victims of rape with a small % committed by strangers. Often occurs in dates when women are forced to have sex. Problem in universities with 1/7 women reporting they were victimized and 1/12 men reporting to forcing their date to have sex)

Sexual Orientation

- A persons preference for emotional and sexual relationships with other individuals

- Heterosexuals = members of the other sex (*straight*), bisexuals = members of either sex, homosexuals = members of the same sex (*gay*, *lesbians*)
- Homosexuality used to be illegal (1965) but it was decriminalized and since 2005 same-sex couples were able to marry in Canada
- But not everyone supports this social trend leading to high rates of victimization in gays
- People gen'lly view homosexuality as 'all or nothing' but many heterosexuals have also had homosexual experiences, and vice versa; so sex. orientation should be seen as a continuum
- # of homosexuals is hard to define because of the continuum factor (ex. married person who's never engaged in homosexual behaviour but has same-sex fantasies) and that many gays are scared to reveal themselves due to –ve backlash
- Approximate # is around 5-8% of population (cited prevalence rate of 1/10)

Environmental theories

- Freudian theorists argued a male will become gay if raised by weak, detatched, ineffectual father who is a poor heterosexual role model and by a mother who is overprotective and close-binding with whom the child identifies
- Behaviour theorists thought it was a learned preference acquired in children when same-sex stimuli was paired with sexual arousal (ex. maybe through chance seductions by adults)
- Freudian/behaviour theories are untrue, but research has discovered: extreme feminine behaviour in young boys/ masculine behaviour in young girls inc. chances of homosexuality, most homosexual people report they can trace their homosexuality to their early childhood before they knew what sex was (but wanted to deny their sex. orientation because of –ve attitudes surrounding it –felt like their feelings couldn't change though)

Biological theories

- Theorists believed there was a difference in hormone levels b/w straight and gay people but this isn't true
- Then, there was a new theory that sex. orientation may be hereditary (of gay men, 52% of their identical twins were gay, 22%of their fraternal twins were gay, and 11% of their adoptive brothers were gay → showing those w/ similar genes were more likely to have same sex. orientation)
- Another theory: differences in brain structure resulting from exposure to prenatal hormones lead to differences in sex. orientation

Other factors

- Found that female sexuality is more heavily shaped and modified by sociocultural factors ("plastic") leading to lesbian/bisexual women changing their sex. orientation over time.
- Women are more likely to trace gay-ness to adulthood rather than childhood

<u>Human sexual response</u>

- Masters and Johnson used physiological recording devices to monitor bodily changes during sex
- 4 phases of sexual response cycle:
    - Excitement: level of arousal escalates rapidly with increase in muscle tension, respiration, HR, BP. Vascongestion (engorgement of blood vessels) causes an erection in males and swelling/hardening of clitoris in females/vaginal lubrication
    - Plateau: arousal increases but slowly. Further vascongestion in women and tightening of vaginal entrance. Men secrete fluid at tip.
    - Orgasm: sexual arousal reaches peak and is discharged in contractions that pulsate pelvic area. Increase in HR, BP, respiration. Males = ejaculation. Females may be multi-orgasmic or not have one at all. Lesbians cite having them more often than straights

- Resolution: reduction in sexual arousal. Men experience refractionary period where they are unresponsive to further stimulation

Video on motivation

- Deals with the differences between intrinsic and extrinsic motivation
- Intrinsic motivation = interest or enjoyment in the task itself, and internal desires and motives without external pressure
- Extrinsic motivation = performance of an activity in order to attain an outcome, external incentives and goals
- Importantly, extrinsic motivation undermines intrinsic motivation
- **http://www.youtube.com/watch?v=u6XAPnuFjJc**

Achievement

- Achievement motive: need to master difficult challenges, outperform others and meet high standards of excellence; involves desire to excel when competing with others
- McClelland sees achievement motive as a 'spark' that ignites economic growth, scientific progress, inspirational leadership and masterpieces in the arts

Individual differences in need for achievement

- Subject's need for achievement can be measured with the Thematic Apperception Test (projective test that requires subjects to respond to vague, ambiguous stimuli in ways that reveal personal motives/traits; ex. shown pics and asked to write stories about what's happening. Themes in stories are then scored to measure strength of needs)
- Scores show people with a high need for achievement: work harder and more persistently on tasks, handle -ve feedback about performance more effectively, are more future oriented and are more likely to delay gratification in order to achieve long-term goals
- In terms of careers, they usually go into competitive, entrepreneurial occupations that provide them with opps to excel
- High achievement motivation is correlated with career success and upward social mobility among lower-class men

Situational determinants of achievement behaviour

- The tendency of pursue achievement in a situation depends on: the strength of one's motivation to achieve success, one's estimate of the probability of success on the task, the incentive value of success on the task (tangible/intangible rewards offered); last 2 factors vary b/w situations
- In gen'l, pursuit of achievement inc. as the probability and incentive value of success increases
- Influence of situational factors explains why people with high achievement motivation tend to select tasks of intermediate difficulty (in easy tasks, success is less satisfying and in hard tasks, success is more satisfying but harder to get. So, moderate tasks offer the best value in maximizing one's sense of accomplishment)
- Also motivated by a fear of failure which influences our relative approach/avoidance of a situation. Fear is a fundamental emotion.
- Emotion can cause motivation (ex. anger about boss → look for new job) and motivation can cause emotion (motivation to win contest → happy if you win)

Elements of Emotion

- Emotions are important in experiences in life (joy at wedding), everyday experiences (happy at acing exam), in mental health (depression, anxiety)
- Emotion involves a subjective conscious experience (cognitive) accompanied by bodily arousal (physiological) and characteristic overt expressions (behavioural)

Cognitive component: Subjective feelings

- Emotions are personal and subjective so psychologists rely on verbal report of what people experience
- Studies show emotions have a 'life of their own'; seem to be something that happens to us, rather than something we can will to occur. So although some degree of emotional control is possible, emotions tend to involve automatic reactions that are difficult to regulate
- People's cognitive evaluations of events are important in determining what emotion they experience. ex. giving a speech may be threatening (brings on anxiety/fear) or non threatening (routine, brings joy) –so, emotions includes an evaluative aspect
- People tend to classify emotions into 'pleasant' or 'unpleasant'; although, there are 'mixed emotions' which include both
- Researchers have typically paid more attention to negative emotions because: there seems to be fewer positive emotions, negative emotions appear to have more powerful effects, psychology has always focused on pathology, weakness, suffering
- Now, psychologists are focusing more on +ve emotions (contentment, well bring, human strengths) with increased interest in the dynamics of happiness

Physiological component

- Emotions are accompanied by visceral arousal (ex. fear → increased heart rate, blood pressure, goose bumps; anxiety → knot in stomach, lump in throat)
- This arousal occurs through actions of the autonomic nervous system which regulates the activity of glands, smooth muscles and blood vessels and is also responsible for our fight/flight response (occurs when we sense threat, regulated by release of adrenal hormones that radiate throughout the body)
- Prominent part of emotional arousal is the galvanic skin response which is an increase in the electrical conductivity of the skin that occurs when sweat glands increase their activity
- This arousal also provides the basis for the Polygraph (lie detector)
    - Device that records autonomic fluctuations while a subject is questioned
    - Can't actually detect lies but instead detects "emotion" by measuring heart rate, blood pressure, respiration rate and galvanic skin response
    - Assumes that when subjects lie, they experience an emotion (anxiety) which produces changes in these indicators
    - Test works by asking a series of nonthreatening changes to get a baseline, then asks critical questions and observes changes.
    - Some say it's 85-90% accurate but this hasn't been proven.
    - Problems: people who are telling the truth may experience emotional arousal to incriminating questions (may make someone look like they're lying), some people (sociopaths) can lie without autonomic arousal; so polygraph can be useful but not reliable enough to use as evidence in court

Behavioural component: non verbal expressiveness

- Emotions are expressed in body language (ex. folded arms) and non verbal behaviour (ex. smile)
- Research has found 6 fundamental emotions people can identify based on facial expression: anger, fear, disgust, surprise, happiness, sadness. Others people can identify less reliably include: contempt, embarrassment, shame, etc.
- Identification of emotions occurs quickly/automatically which shows that people are reasonably skilled at deciphering emotions for observing facial expressions
- Some theorists think muscular feedback from ones' own emotions may contribute to the conscious experience of emotion. Called Facial Feedback Hypothesis: when people use their facial muscles to mimic a facial expression, they actually experience the emotion

- Other theorists feel facial expressions may be innate (ex. people blind from birth then to smile and frown like everyone else even though they've never seen a smile/frown)

Culture and the elements of emotion

- If facial expressions are innate, they should be universal
- Evidence that people express and interpret emotions in the same way was found in a study that tested people from different countries (ex. Spain, Japan, and even a remote tribe in New Guinea). People had to identify the 6 main emotions (happy, sad, angry, disgust, surprise, fear) all did a fair job of identifying them
- Similarities found across cultures: people evaluate situations along the same dimensions (pleasant vs unpleasant, expected vs unexpected), people respond to events similarly (events trigger same emotions – ex. risky sit. = fear), physiological arousal is also similar across cultures
- Differences among cultures:
    - Differences in how people think about, experience, regulate and express their emotions (ex. Japanese culture encourages the experience of socially engaging emotions like sympathy, guilt, friendly feelings where North American culture encourages socially disengaging emotions like pride, anger).
    - Differences in how cultures categorize emotions. Ex. some cultures lack words for depression, anxiety, remorse. But this doesn't mean those emotions aren't recognized (so this might not reflect diff. in emotional processing)
    - Differences in nonverbal expressions. Cultures vary in how people are allowed to/socialized to express emotion. "Display Rules" are norms that regulate the appropriate expression of emotion (state how, when and to whom emotions can be expressed). Ex. In Japan, people must suppress –ve emotions in public

Theories of Emotion

Common sense

- Emotion causes feelings of arousal; I see a dog, I feel fear, then I start to tremble
- "I tremble because I feel afraid"

James Lange Theory

- James and Carl Lange proposed that the conscious experience of emotion results from one's perception of autonomic arousal; I see a dog, I start to tremble, then I feel fear
- "I feel afraid because I tremble"
- Emphasizes the physiological determinants of emotion
- Different patterns of autonomic activation lead to the experience of different emotion
- I can tell fear, joy and anger apart based on the configuration of physical reactions I experience

Cannon-Bard Theory

- Cannon didn't agree with James-Lange theory arguing: physiological arousal may occur without subjective experience of emotion (ex. exercise), visceral changes are too slow to precede the subjective experience of emotion
- Cannon-Bard theory suggested that emotion occurs when the thalamus (as sub cortical brain structure) sends signals simultaneously to the cortex (resulting in a subjective experience) and autonomic nervous system (creating visceral arousal)
- I see a dog, my brain registers the dog and makes me feel afraid/start trembling at same time
- "The dog makes me tremble and feel afraid"

Schachter's Two Factor Theory

- Stanley Schachter stated people look at sit. cues to differentiate among alternative emotions.
- Said the experience of an emotion depends on 2 factors: autonomic arousal and the cognitive interpretation of that arousal
- So, when you experience visceral arousal, you search the environment for an explanation
- I see a dog, I begin to tremble, I then appraise the situation as threatening, I then feel fear
- "I label my trembling as fear b/c I appraised the situation as dangerous"
- Schachter's theory focused on external rather than internal cues to differentiate and label specific emotions
- Limitations: situations can't mould emotions in any way at any time and in searching for arousal, subjects don't limit themselves to immediate situation
    - Look at environment → ex. if it's with its owner then it might not be as scary

Evolutionary theories

- States emotions developed due to their adaptive value (ex. fear would help avoid danger and aid in survival)
- Evolutionary theories consider emotions to be innate reactions that should be immediately recognizable, without much thought. Believe emotions evolved before thought and assume that emotions originated in subcortical brain structures that evolved before higher brain areas (cortex) associate with complex thought
- Theory states that evolution has given us with a small number of emotions with proven adaptive value (ex. fear, joy etc.) and strives to find fundamental emotions that everyone exhibits.
- Theorists account for variance in emotions by proposing complex emotions are blends of primary emotions and variations in intensity. E.g., Fear + Surprise = awe

Chapter 11: Human Development Across the Lifespan

- Development: sequence of age-related changes that occur as a person progresses from birth to death (both biological and behavioural changes that happen as people get older)
- Development is a lifelong (ex. learning to walk as a baby, getting a job as an adult, becoming a grandparent)
- Lifespan is divided into 4 periods: prenatal, b/w conception and birth, adolescence, adulthood

Prenatal Development

- Prenatal development starts w. conception
- Conception occurs when fertilization creates a zygote (one celled organism created by union of sperm and egg. All other cells in body are formed from this cell. Within the cell are chromosomes which contain genes that are 'hereditary blueprints')
- Prenatal period goes from conception to birth (~9 mths pregnancy) and development is this period is very rapid. Prenatal period is divided in 3 phases:

Germinal Stage (first 2 weeks after conception):

- Within 36 hrs of zygote formation, rapid cell division begins and zygote becomes a mass of cells that migrates to mother's fallopian tube and uterine cavity.
- On 7th day, the cell mass beings to implant on uterine wall (process takes ~1 week but many zygotes are rejected; 1/5 pregnancies end here).

- During implantation, placenta forms (structure that allows O_2 and nutrients to pass into fetus from mother's bloodstream and bodily wastes to pass out of mother; occurs through a thin membrane which prevents mixing of fetal and maternal bloodstreams)

Embryonic Stage (2 weeks until the end of 2nd month):

- Organism is called an embryo (~2.5 cm long)
- Most vital organs/bodily systems begin to form (heart, spine, brain emerge with cell division becoming more specialized; arms, legs, etc. are also visible).
- Since all major structures are being formed, this stage is also most vulnerable because any change can be devastating (most miscarriages/defects happen during this stage).

Fetal Stage (2 months until birth):

- Organism is called a fetus.
- In first 2 mnths of stage, there is rapid bodily growth with muscles/bones forming marking organism capable of physical movements as skeletal structure hardens.
- In 3rd mnth, sex organs form and other organs continue to grow.
- In last 3 mnths brain cells multiply quickly, fat is deposited under skin for insulation and respiratory/digestive systems mature.
- Age of viability (age at which a baby can survive a premature birth) is reached between 22-26 weeks (slim chance) or 26-28 weeks (85% survival rate)

<u>Environmental Factors and Prenatal Development</u>

Maternal Nutrition

- Too much/too little weight gain during gestation is associated w. birth complications
- Guidelines for maternal weight gain is based on pre-pregnancy BMI
- Health Canada suggests mothers should be ok if they follow Canada's food guide and maintain an active lifestyle
- Developing fetus needs a variety of nutrients so maternal malnutrition is really bad and can lead to birth complications/neurological defects (major issue in developing countries w. little access to food).
- Prenatal malnutrition may have –ve effects in later years (psychiatric disorders in teen/adult years ex. Schizophrenia. Low birth weight also increases risk of heart disease/diabetes in adults
- After birth, maternal nutrition affects babies through breastfeeding which should last for 2 yrs

Maternal Drug Use

- Concern with mothers using tobacco/alcohol/prescription/recreational drugs since most drugs pass through placenta
- Effect of heroin: increased risk of death from prematurity, birth defects, respiratory difficulties and problems associated. w addiction
- Effect of cocaine: increased risk of birth complications and cognitive deficits in childhood
- Effect of marijuana: physical/cognitive effects – ex. Disturbances in functioning of prefrontal part of brain at age 3 leading to problems with attn. span, impulses and problem solving ability
- Effect of alcohol: leads to Fetal alcohol syndrome (collection of congenital [inborn] problems associated w. excessive alcohol use during pregnancy) which leads to microcephaly (small head), heart defects, irritability, hyperactivity, delayed mental/motor dvlpmt. Most common cause of mental retardation and leads to difficulty in school, depression, suicide, drug use, crimes. Symptoms become apparent in teen yrs/adulthood. Study of 14 years olds whose mothers drank showed teens had lower IQ's, slower reaction time, motor skills, attn. span, poor math skills, increased impulses and delinquent behaviour

- Effect of tobacco: physiological changes due to a reduction in the flow of O2 and nutrients to the fetus. Increases risk of miscarriage, stillbirth, prematurity and sudden infant death syndrome. Can also lead to slower than avg. cognitive dvlpmt, attn. defecits, hyperactivity + conduct issues
- Impact of drugs on fetus varies depending on drug/dose and phase of dvlpmt

Maternal illness

- Fetus is defenceless against infection as immune system dvlps late; placenta screens out a number of infectious agents but not all so maternal illness can affect dvlpmt
- Diseases such as rubella, syphilis, cholera, smallpox, mumps and the flu can affect the fetus
- Herpes is transmitted during birth when newborns come in contact w. mother's genitals. It can cause microcephaly, paralysis, deafness, blindness, brain damage
- AIDS is transmitted prenatally through placenta, birth or breastfeeding. 20-30% of women carrying AIDS pass it on to their babies
- Prenatal problems can be avoided w. good care/guidance from doctors. Canada ranks 16th in prevention of infant mortality

Childhood

Motor development: Progression of muscular coordination required for physical activity

- *Principles*: (1) Cephalocaudal trend: head to foot direction of motor development. Children gen'lly dvlp arms faster than legs shown by ability to crawl, (2) Proximodistal trend: centre-outward direction of motor dvlpmt. Children learn to control their torso/extremities by twisting body then extending arms, (3) Maturation: dvlpmt that reflects the gradual unfolding of one's genetic blueprint
- Motor dvlpmt depends on rapid physical growth; infants grow triple their birth weight during 1st yr and height inc. by 45%
- Driving force behind dvlpmt is infant's ongoing exploration of their world, need to master specific tasks, experimentation, learning/remembering consequences
- *Developmental Norms*: indicate the median age at which individuals display various behaviours/abilities (ex. Avg child first speaks at 12 mths)
- Useful benchmarks to assess child's relative dvlmpt; however parents shouldn't be overly concerned if child is behind since typical age of doing an activity varies a lot. Most normal, healthy children don't achieve certain milestones until way after the median cited time
- *Cultural variations*: dvlpmt varies b/w cultures because of difft practices in place (ex. In Kenya, babies mature faster because they begin active efforts to train infants to sit/stand right after birth)
- Cultural variance in motor dvlpmt shows how environmental factors speed up/slow down dvlpt. But, similarities among cultures in the sequence/timing of early motor dvlpt outweighs the diff.
- So, early motor dvlpmt depends on maturation and later motor dvlpmt is more influenced by environment/experiences

Easy and difficult babies – differences in temperament

- Temperament: characteristic mood, activity level and emotional reactivity (infants show consistent diff. in emotional tone, tempo of activity, sensitivity to enviro.)
- Thomas and Chess completed a longitudinal study of children and tracked their dvlpmt into adulthood. They found temperament was established when infant is 2-3 mths old and established 3 types: (1) 40% of children were 'easy': happy, regular eating/sleeping, not easily upset, (2) 15% were 'slow to warm up': less cheery, less regular sleeping/eating, wary of new things, (3) 10% were 'difficult': sad, erratic sleeping/eating, irritable, (4) last 35% were mixed. Their study found difficult children had more emotional problems later in life

- Approaches to assessing change over time:
    - Longitudinal: observe 1 group of people repeatedly over a period of time (ex. 1 group of six year olds; studied at age 6, 8 and 10); more sensitive to developmental influences and changes compare to cross sectional but many people drop out (takes too long)
    - Cross sectional: observe diff. groups of people at a single pt in time (ex. studying groups of 6, 8 and 10 year olds at same time); quick, easy and cheap
- Recent studies show temperament stabilizes later (at age 1-2)
- Kagan found 15-20% of infants display inhibited temperament (shy, timid, wary of new experiences), 25-30% exhibit uninhibited temperament (less restrained, approach new things with little worry)
- Temperament is heavily influenced by heredity and is fairly stable over time but can be changed. Parental reactions and social experiences can gradually change temperamental characteristics

<u>Early Emotional Development: Attachment</u>

- Attachment: close, emotional bonds of affection that dvlp b/w infants and their caregivers (usually with mother first (primary caregiver) then with others; occurs by 6-8 moths)
- Separation anxiety: emotional distress seen in many infants when they are separated from the people with whom they have formed the attachment (peaks at 14-18 mths, then declines)
- Initially people thought babies had sep. anxiety with mothers because their attachment was re-inforced through the mothers providing food. To test this, Harry Harlow did a study with monkeys and substitute mothers. One mother was cloth and provided contact comfort. The other was wire and fed the monkeys. Harlow introduced a frightening toy to see what monkeys would do and the monkeys all went to the cloth mother, even if they weren't fed by it. This proved, attachment wasn't just related to feeding
- Then, John Bowlby who was interested in the importance of comfort/contact argued that a biological basis for attachment. He said, infants are biologically programmed to emit behaviour (ex. smiling, clinging) that triggers an affectionate, protective response from adults (ex. warmth, love)

Patterns of Attachment

- Infant-mother attachments vary in quality. Usually follow 4 patterns:
    - (1) Secure attachment: infants play/explore comfortably with mother present, become upset when she leaves, are quickly calmed by return
    - (2) Anxious-ambivalent attachment: anxious even with mother present, become increasingly upset when she leaves, not that comforted by return
    - (3) Avoidant Attachment: seek little contact with mother, not distressed when she leaves
    - (4) Disorganized-disoriented Attachment: confused if they should approach/avoid mother, especially insecure
- Mary Ainsworth states attachment comes from interplay b/w mother and infant. Mothers who are sensitive/responsive evoke a secure attachment vs. those who are insensitive/unresponsive; but infant's temperament plays a role too. Infants are active participants in relationship and may affect mother's mood/responsiveness. If they're difficult, mother may be frustrated/insensitive
- Quality of mother-infant relationship may have important consequences for person's dvlpmt. Based on attachment experience, children dvlp an internal working model of the dynamics of close relationships. Securely attached infants tend to become more resilient, competent toddlers with high esteem. Display more persistence, curiosity, self-reliance,

eldership in preschool. Also have better peer relations and experience fewer negative and more positive emotions. Have healthier intimate relationships during adulthood. But, this data is a correlation, the attachment relationship hasn't been proven as a *cause* for the difference

Daycare

- 50% of children under 5 receive some non maternal care; this is increasing
- Jay Belsky suggest babies receiving 20+ hrs of non maternal care have an inc. risk of dvlping insecure attachments but this hasn't been proven. Studies have shown daycare can actually be beneficial if child is reared in a deprived environment

Culture effect

- Attachment seems to be universal (ex. sep. anxiety peaks at 14-18 mths in all cultures)
- But, there's some cultural variations in patterns of attachment (ex. avoidant attachment is a lot more common in Germany but almost nonexistent in Japan)
- These diff may be from variations in child-rearing practices or diff in how people view 'secure' attachments

Evolutionary

- Evolutionary theorists emphasize how attachment contributes to parents' and children's reproductive fitness (ex. point out that if parents expect to pass their genes on to future generations they need to raise offspring to reproductive age and help them dvlp social maturity needed for successful mating as parent-child attachments help foster social/emotional dvlpmt)

<u>Personality Development</u>

- Stage: dvlpmental period where characteristic patterns of behaviour are exhibited and certain capacities are established; say little of indiv. diff but provide an ideal/typical description
- Stage theories assume: (1) individuals must progress through specific stages in order since each stage builds on the previous one, (2) progress in stages strongly related to age, (3) dvlpmt is marked by major discontinuities that usher in dramatic transitions in behaviour (can't move on until you figure out/resolve the crisis)

Erikson's Stage Theory

- Life consists of 8 stages. Each stage has a psychosocial crisis relating to a transition in important social relationships. Personality is shaped by how people deal with these crises
- Each crisis involves 2 opposing tendencies (ex. trust vs. mistrust), and each stage is a tug of war that determines the subsequent balance b/w opposing polarities in a person
- Four of these stages occur in childhood:
    - Stage 1: Trust vs. Mistrust: 1st yr of life when infant must depend on adults to take care of necessities. If needs are met, good attachments are formed and child should develop a happy/trusting attitude of world; if they're not child will be pessimistic/distrusting
    - Stage 2: Autonomy vs. Shame & Doubt: 2nd and 3rd yrs, parents begin to regulate child's behaviour and child must take some responsibility for themselves (ex. feeding, dressing). If it goes well, child becomes self-sufficient but if parents aren't satisfied with child, parent-child conflicts occur and child may dvlp a sense of personal shame/doubt
    - Stage 3: Initiative vs. Guilt: ages 3-6, children experiment and take initiative that may conflict with parents rules. Ideal situation is when children retain a sense of initiative and learn to respect their rights/privileges. But, if parents are over-controlling, they may instill guilt. Instead, parents should support independence while maintaining control

- Stage 4: Industry vs. Inferiority: age 6-puberty, children must learn to function socially in a broader realm (neighbourhood, school). Children who function effectively and learn to be productive will value achievement and gain a sense of competence

- Erikson's theory is good because it accounts for transition/continuity. It shows transition through new challenges in social relationships that allow for personality dvlpmt. It shows continuity by making connections b/w childhood experience and adult personality. But, it can't explain major personality diff among people (since it's a gen'l overview)

Cognitive Development: Transitions in patterns of thinking (reasoning, remembering, prob solving)

Piaget's Stage Theory

- Based on interest of how children *use* intelligence; ideas based on observation of own children
- Dvlpd stage theory where children progress through 4 stages of cognitive dvlpmt based on diff thought processes. Believed that through interaction with their environment, children progress in thinking through assimilation (interpreting new experiences w/out changing previous knowledge. Ex. calling a 4 legged animal a dog) and accommodation (changing existing knowledge to explain new experiences ex. learning the 4 legged animal is a cat)
- Stages:
  - *Sensorimotor Period* (birth to age 2): dvlp ability to coordinate sensory input/motor response. Dvlp symbolic thought and learn to use mental symbols to represent objects (ex. a mental image of a toy). Done through object permanence (when baby recognizes that objects continue to exist even when they're no longer visible; know they understand this when they begin to search for the hidden object)
  - *Preoperational Period* (ages 2-7): Children improve use of mental images but don't understand: (1) conservation – awareness that physical quantities remain constant in spite of changes in appearance, (2) centration – tendency to focus on 1 feature of a problem and ignore other aspects, (3) irreversibility – inability to mentally reverse an action, (4) egocentrism – limited ability to share another's viewpoint. Also involves animism which is the belief that everything's living (ex. why does wind get mad?)
  - *Concrete Operation Period* (ages 7-11): Can perform mental operations on images of tangible objects/actual events. Learn reversibility (can mentally undo an action) and decentration (can focus on more than 1 feature of a problem at the same time). Children learn to look at things in diff ways leading to a decline in egocentrism and mastery of conservation of liquid/mass/#/volume/area/length.
  - *Formal Operational Period* (>11): learn to apply and enjoy operations related to abstract concepts (eg love/justice). Become more systematic in problem solving; more likely to think things through instead of using trial/error; thought process is abstract, systematic, logical and reflective
- Criticisms: (1) Underestimated speed of cognitive dvlpmt (ex. infants dvlp object permanence at 3-4 mths), (2) Says little about individual differences in dvlpmt, (3) sequence of stages children go through are universal, but time required to pass through each stage varies by culture

Alternative Cognitive Development Theories

- Neo-Piagetian: Pascual Leone developed the concept of M-capacity suggesting an inc. in info processing capacity is an attribute that forms the basis for cognitive dvlpmt. Difficult mental tasks require are more mentally demanding so children are only successful if they have enough mental power. Robbie Case developed a staircase model where he agreed with Piagetian's stages of dvlpmt but asserted there may be a distinct set of cognitive skills

involved that may show uneven dvlpmt; also related importance of culture/age in cognitive dvlpmt

- Vygotsky's Sociocultural Theory: states that children's development is shaped by social interactions, culture greatly influences cognitive growth, learning new languages fosters cognitive growth and that children get most cognitive and problem-solving skills through collaborative dialogues with experienced others (viewed skill dvlpmt as an *apprecticeship*)
- Major concepts: (1) Zone of Proximal Development: gap b/w what a learner can accomplish alone and what they can achieve with guidance from skilled partners. ZPD for a task is the area in which new cognitive growth is likely so it should be focused on during instructional efforts. (2) Scaffolding: when assistance provided to a child is adjusted as learning progresses (eg less assistance given as competence for a task increases). (3) Private Speech: Children use this private speech to plan their strategies, regulate actions, accomplish goals. As children grow older, private speech is internalized to the normal internal dialogue that everyone experiences

Innate Cognitive Abilities

- Test using the *habituation-dishabituation paradigm.*
- Habituation is a gradual reduction in the strength of a response when a stimulus event is presented repeatedly (ex. show baby a toy over and over – they eventually get bored)
- Dishabituation is when a new stimulus elicits an increase in the strength of an habituated response. Patterns of dishabituation help show if an event surprises or interests infants
- Research shows 3-4 mth babies know that objects are distinct entities with boundaries, objects move in continuous paths, one solid object cannot pass through another, an object can't pass through an opening that is smaller than the object, objects on slopes roll down rather than up
- At 9-12 mths, infants can recognize if common objects belong to sensible categories (eg food, animals) and also seem to be able to add and subtract small numbers
- This suggests basic cognitive abilities may be innate but evolutionary theorists think these abilities are products of natural selection

<u>Critical Periods of Development</u>

- Critical period: limited time span when it's optimal/essential to dvlp particular abilities or characteristics b/c the organism is especially responsive; suggests if knowledge/skill isn't acquired at that point, it won't be possible later
- Sensitive Periods: optimal periods for acquisition of skills/knowledge; doesn't mean you can't acquire skill later (eg at age X, brain facilitates learning language → but you can still learn after)

<u>Theory of Mind:</u> Children's understanding about the mind and how they perceive others' thoughts/feelings/beliefs

- Children under 4 don't understand that people can hold false beliefs that don't reflect reality
- After 4, children understand people can hold false beliefs and their mental reasoning improves
- They dvlp a 'copy' view where they believe the mind operates like a recording device
- Then they move to the interpretative theory of mind to understand that minds construct and uniquely interpret reality
- Milestones: Age 2 - distinguish between mental states (eg desires, emotions) and behaviours, Age 3 – talking about others beliefs and thoughts, Age 4: understand how others beliefs and desires motivate and direct their behaviour
- May play a role in autism because autistic children have difficulty understating other people and different perspectives. Can't relate/form proper attachments to others

<u>Moral Reasoning</u>

- Morality = ability to know what's right from wrong and behave accordingly

Lawrence Kohlberg's Stage theory

- Presented moral dilemmas and asked subjects what person in dilemma should do, and *why*
- Identified 3 levels of moral development:
  - Preconventional Level: younger children think in terms of external authority. Believe acts are wrong b/c they are punished, acts are right b/c they are rewarded
  - Conventional Level: older children think in terms of social order. Believe acts are right or wrong by close other's approval and societal laws/rules which should be rigidly obeyed
  - Postconventional level: teens think in terms of personal code of ethics. Less accepting of rules, more flexible moral thinking. Right/wrong b/c of ethical principles emphasizing equity and justice
- Individuals usually progress through stages in order but vary in the age they reach stages at
- Moral reasoning seems to be moderately predictive of actual behaviour; youngsters w. higher moral dvlpmt are more likely to be altruistic, conscientious and honest
- Critisisms: Individuals can show several levels of morally reasoning, Research has focused too much of hypothetical, specific dilemmas, Seems to be cultural variations, Based primarily of male participants responses

Transition to Adolescence

- Adolescence: transitional period b/w childhood and adulthood (ages 13-22) where people experience great physiological and emotional change
- Teen yrs don't exist in all cultures (some just go from childhood → adulthood) but our society prolongs teen yrs because of tech. advancements and a lengthy education process leading to prolonged dependence. N American teens capable of reproduction but still emotionally/economically dependent on parents
- Period of high stress with work/school/relationships/new opps. Time for accomplishment and self growth (dvlp healthy relationships and form self identity)

<u>Physiological changes</u>

Pubescence – 2 yr span before puberty where changes leading to physical/sexual maturity occur

- Adolescent growth spurt: rapid height/weight growth brought on by hormonal changes (possibly linked to rising levels of leptin)
- Secondary sex characteristics develop: physical features that distinguish one sex from the other but that are not essential for reproduction (ex. males → voice change, facial hair, skeletal/muscle growth in upper torso. Females → breast growth, widening of the pelvic bones, increased fat deposits in pelvic area, resulting in wider hips)

Puberty: stage where sexual functions reach maturity (beg. of adolescence)

- Primary sex characteristics (structures necessary for reproduction) develop fully; males = penis, testes; women = ovaries, vagina
- Onset of puberty is signalled by menarche (1st menstruation) in females at ~12 ½ and spermarche (1st ejaculation) in males at ~14.
- Now, teens hit puberty at younger ages and complete it more rapidly because of improvements in nutrition and medical care. Age teens hit puberty is largely based on heredity but can be affected by the quality of a person's family relationships in early childhood
- In gen'l, girls who mature early/boys who mature late have more emotional difficulty with the transition to adolescence (eg. greater use of alcohol/drugs, risky behaviour, trouble w law)

Neural development

- Teenage brain considered a "work in progress"; speculations about cognitive, emotional and behavioural changes linked to changes in the brain
- Changes: white matter increases, gray matter decreases. White matter composed of nerve fibres facilitates communication/linkages between regions of the brain and allows for a more smooth flow of info. Gray matter composed of neurons/cell like extensions is the thinking part of the brain. Increase in white matter leads to enhanced conductivity & connectivity in brain (called synaptic pruning – elimination of less active synapses which helps form neural networks)
- Most changes occur in prefrontal cortex ('executive control center') which is responsible for planning, organization, emotional regulation and response inhibition. Prefrontal cortex doesn't mature fully until 20 which may explain risky behaviour in adolescence; but teens are affected by other factors (peer pressure) which also effects their decision making

Turmoil

- Teen yrs have traditionally been characterized by instability/turmoil/difficulty because of physical/emotional changes and search for identity; but, overall it hasn't shown to be overly difficult (most teens are happy and suggest the future looks good)
- May be true for a significant minority though with depression rate as high as 20%. Yet, depression is gen'lly short lived
- Small % have recurring depressive episodes due to conflicts in relationships. In US, suicide 3rd leading cause of death among adolescents and depression is a risk factor for suicide. Suicide rates have inc. a lot over past decades but are still lower than older age groups. Ethnic/racial groups vary in suicide rates w/ Aboriginals being highly susceptible. Yet, researchers believe cultural continuity factors (strong sense of personal/cultural identity) are not present with teens who have committed suicide but are a crucial part of changes teens deal with
- Turmoil may also be linked to highly publicized and increasing amts of teen violence (inc. #'s of teenage girls now charged with violent crimes, inc. interpersonal violence in girls)
- Bullying and interpersonal conflict may also create turmoil
- Conclusion: teen yrs aren't generally a period of difficulty and not everyone experiences problems but they are more likely to occur in teenage years than any other periods

Search for Identity

- Stage in Erikson's personality theory: Identity vs confusion (struggle to form clear sense of identity). Teens must work to form a stable concept of themselves as a unique individual and embrace a system of vales that provide a sense of direction
- Formation of identity is lifelong but is particularly intense in adolescence
- Presence/absence of a sense of commitment to life goals/values and crisis due to active questioning and exploration generated 4 "identity statuses" (orientations people exhibit):
    - Identity diffusion – no struggle/concern for identity, apathetic
    - Identity foreclosure – premature commitment to visions/values/roles (usually suggested by parents). Teens adopt societal values without question; not open to new things
    - Identity moratorium – delay commitment to a particular identity while experimenting with difft options; active struggle to find self
    - Identity achievement – arriving at sense of self after consideration of alternatives. Associated with higher self-esteem, conscientiousness, security, achievement motivation, capacity for intimacy
- People generally go b/w orientations until they achieve identity (usually in adulthood)

Emerging Adulthood

- A possible new developmental stage (18-25) due to people delaying marriage/parenthood, lengthier education, increased barrier to financial independence
- Characterized by: (1) the subjective feeling that one is b/w adolescence and adulthood, (2) new opps and optimism about future, (3) self focused time where people's lack of commitment gives them increase freedom to explore
- Also a period of identity formation

Adulthood

Personality

Stability

- Personality tends to be stable over periods of 20-40 yrs
- Lawrence Pervin stated that personality is characterized by stability and change. Some personality traits remain stable while others change systematically as one grows older
- Valliant stated that if you define personality in terms of temperament, it is stable. But, if you define it in terms of character (lifestyle/life choices) there is a lot of change

Midlife Crisis

- Difficult, turbulent period of doubts and re-appraisal of one's life
- Research suggests midlife crises only occur in small minorities of pop (2-5%)
- Otherwise, midlife is a period of increased reflection/contemplation of one's life

Erikson's theory

- Intimacy vs Isolation: occurs in early adulthood when people dvlp capacity to share intimacy with others. Achieving this stage promotes empathy and openness
- Generatively vs Self-Absorption: occurs in middle adulthood; adults acquire a genuine concern for the welfare of future generations, guide younger people and are concerned w their legacy
- Integrity vs Despair: occurs in late adulthood when adults need to avoid dwelling on mistakes/imminent death and find meaning/satisfaction in their lives

Transitions in family life

- Family life cycle: sequence of stages families progress through
- Social trends are altering traditional family life cycle of a family with a husband and wife who've never been married having 2+ kids w/ man being breadwinner and women being homemaker
- Now, there are more single adults, divorces, stepfamilies, mothers working etc.
- People are getting married and starting families at later ages or just remaining single
- But, everyone emerges from a family, and most go on to form their own. 90% of Canadians eventually marry

Marriage

- Newlyweds discover marital roles slowly. Problems with this transition arise when spouses have diff expectations about marital roles.
- Women are vulnerable because they want careers but husbands careers still take priority
- Also, husbands maintain traditional role expectations about housework/child care/decision leaving wives to perform most of household chores. In gen'l, married women perform 2/3 of housework, but only 1/3 of women say it's unfair as they don't expect a 50-50 split
- Wives who perceive housework burden to be unfair report lower levels of marital satisfaction
- Satisfaction in marriage is "U-shaped". 1st few years of marriage are "blissful" but middle phase has low satisfaction from the burden of child-rearing and reduction in time spent together; when children grow up satisfaction inc. again
- But, marital satisfaction declines in early stages of marriage even with no children so other factors may contribute to the pattern

- Also, before the pre-children phase used to be short as people expected to get married and have kids right away. Now couples are more reluctant to have children (# of childless couples doubled since 1960) and ¼ change plans to have children

Adjusting to parenthood

- Majority of couples have children and rate parenthood as a highly +ve experience
- Arrival of first child represents a major transition as old routines are disrupted which can be stressful. Women are vulnerable to stress as they are exhausted from birth process, may shoulder most of the burden of infant care and often return to the workplace (deal w 2 roles)
- Couples with high levels of affection/commitment before child's birth are likely to maintain at a stable level of satisfaction after birth of first child. The key to this is setting realistic expectations about parental responsibilities.
- As children grow older, parental influence declines and early parental yrs can be recalled fondly
- As children reach teen yrs, some realignments occur from parent-child relationship. Parent-teen relationships aren't as bitter as assumed but family activity/closeness to parents decreases and conflict increases
- Conflicts seem to have more adverse effects on parents; parents are more stressed than teens

Adjusting to empty nest

- "Empty nest" syndrome occurs when children move into the adult world and leave home
- More difficult before, especially for mothers since they only had maternal role. Now women have diff roles outside home so they adjust more effectively to empty nest transition than if children return home ("boomerang children"- take longer to make key life transitions)
- Post parental period provides couples with freedom to devote attention to each other
- Many take advantage by traveling, developing new interests
- But couples must adapt to spending more time together and must renegotiate role expectations
- Overall, couple report high satisfaction until death

Physiological changes

- In both sexes, hair grays and thins out and additionally males face receding hairlines/baldness
- Body fat increases, muscle tissue decreases and adults experience weight gain
- Changes to appearance may affect self-concept; adults may view themselves as unattractive
- Vision/hearing declines. Farsightedness and difficulty seeing in low light becomes common while sensitivity to colour/contrast declines. Hearing sensitivity/loss declines gradually too. These problems can be combated w/ glasses, contacts and hearing aids
- Hormone changes. Women experience menopause (ending of menstrual periods and loss of fertility. Associated w unpleasant symptoms like hot flashes, headaches, mood changes but now women experience only modest psychological distress). Men experience gradual decrease of testosterone leading to declines in muscle mass, sexual functioning, mental sharpness

Neural changes

- Brain tissue and weight decline from a decrease in the # of active neurons in some areas of brain and shrinkage of still active neurons (normal part of aging process)

Dementia

- Abnormal condition marked by multiple cognitive defects. Can be caused by various diseases such as Alzheimer's, Parkinson's, Huntington's, AIDS, etc and is seen in about 15-20% of people over 75. But it's NOT a normal part of the aging process

Alzheimer's

- Accounts for 60% of cases of dementia and is accompanied by structural deterioration in brain
- Alzheimer's causes profound and widespread loss of neurons and brain tissue and an accumulation of neural abnormalities known as neuritic plaques and neurofibrillary tangles
- Disease progresses over 8-10 yrs leading in death
- In early stages, damage is centered in hippocampal region which plays a crucial role in memory causing problems with selective attention. Recognized symptom is forgetting newly learned info
- Gradually, more obvious problems emerge. Ex. difficulty speaking, performing complicated tasks, depression, sleep disturbance
- Then profound memory loss develops. People can no longer do jobs, drive, and fail to recognize familiar people (hard for family members)
- At the end, patients are often restless, have hallucinations, delusions and are paranoid; they become disoriented and can't care for themselves
- Causes aren't well understood. Genetic factors contribute, but exact role is unclear
- Protective factors show to reduce vulnerability are reg. exercise +participation in stimulating cognitive activities

Cognitive changes

- General intelligence is fairly stable (small decline). Fluid intelligence (information processing skills) is more likely to decline than crystallized intelligence (accumulated knowledge)
- Memory loss is moderate and not experienced by all.
- Speed in learning, problem solving and information processing seems to decline.
- Problem solving ability remains largely unimpaired
- Important to note that many great intellectual accomplishments occur in the 40's (highest productivity) and productivity remained fairly stable in 60's & 70's
- Researchers have been looking into idea on whether high levels of mental activity delay age-related declines in cognitive functioning ("use it or lose it"). Research supports this hypothesis in that people who work in demanding jobs in old age show smaller decrements in cogn. abilities

Ageism

- Stereotypes and discrimination against individuals or groups because of their age
- Increasingly salient in the workplace, especially since people are living longer
- Can have negative effects on self-esteem and behaviours
- When older younger people hear stereotypes about their supposed incompetence and uselessness, they perform worse on measures of competence and memory
- Can become self-fulfilling prophecies and people can internalize these stereotypes

Chapter 12 – Personality

- Personality is an individual's unique constellation of consistent behavioural traits. Personality explains: (1) the stability in a person's behaviour over time/across diff situations (consistency), (2) why people act differently in similar situations (distinctiveness). People have traits in common but each has their own unique set of personality traits

Personality Traits: Dispositions and Dimensions

- Personality trait: durable disposition to behave in a particular way in a variety of situations (ex. honest, dependable, impulsive etc.)
- Some traits are more basic than others which means that a small # of traits determine other more superficial ones (ex. excitable = impulsive, restless, irritable)

- Cattell used factor analysis (correlations among variables are analyzed to identify closely related clusters of variables) to identify basic personality traits that determine more specific traits and concluded a person's personality can be measured using 16

5 Factor Model

- McCrae and Costa used factor analysis to identify 5 main personality traits ("Big Five") from which all other traits are derived from.
    - *Openness*: related to one's curiosity, flexibility, vivid fantasies, imaginativeness, artistic sensitivity, and unconventional attitudes. Fosters liberalism and may be a key determinate of people's political attitudes and ideology
    - Conscientiousness (constraint): people who are diligent, disciplined, well-organized, punctual and dependable. Associated with being highly diligent in the workplace
    - Extroversion: people who are outgoing, sociable, upbeat, friendly and assertive. Have +ve emotionality
    - Agreeableness: people who are sympathetic, trusting, cooperative and modest. People who effectively deal w/ conflicts and reduce tension. Opposite: suspicious, aggressive
    - Neuroticism: people who are anxious, hostile, self-concious, insecure. Tend to overreact more in response to stress than others. Referred to as –ve emotionality
- Big 5 are associated w/ specific aspects of people's personalities (ex. extroversion = more dates)
- Correlations have also been found between Big 5 and some important life outcomes. High conscientiousness = higher grades (study more), high extroversion/conscientiousness = occupational attainment, neuroticism = divorce or higher chance of mental/physical disorders, conscientiousness/agreeableness = less illness and live longer
- Traits are characterized as foundation for which personality should be mapped
- Critics of theory say there needs to be more than 5 traits to account for variations in humans (ex. some think humility/honest should be #6) and current traits don't account for all behaviour (ex. manipulative, conservative)

Psychodynamic Perspectives: theories derived from Freud's work focusing on unconscious mental forces

Psychoanalytic Theory (Freud)

- Freud: grew up in middle class Jewish home during Victorian era (marked by sexual repression), hardworking/wanted fame, experienced inner turmoil & engaged in self-analysis, lived during WWI with anti-Semitism. Became a physician for neurology and became devoted to treating patients with irrational fears/anxiety. Dvlpd a procedure called psychoanalysis through lengthy verbal interactions with patients over many yrs
- Psychoanalytic theory explains personality, motivation and psychological disorders by focusing on early childhood experiences, unconscious motives/conflicts and the methods people use to cope with sexual and aggressive urges
- Criticisms: (1) theory focused on unconscious motives suggesting humans don't control their own minds, (2) theory focused on early childhood experiences suggesting adults can't control their own destiny, (3) theory emphasized sex which was offensive during time period

Structure of Personality

- Personality has 3 components: the id, the ego and the superego
- Id: primitive, instinctive component of personality that operates according to pleasure principle (demands immediate fulfillment of urges – in specific, biological ones like eating/sleeping). Engages in 'primary-process thinking' (primitive, irrational, fantasy-oriented)

- Ego: decision making component of personality that operates according to reality principle (delays gratification of the id's urges until appropriate outlets can be found. Considers social norms/expectations in deciding behaviour). Also wants max. gratification but engages in 'secondary-process thinking' (rational, realistic, problem solving) which helps in achieving long-range goals and avoiding negative consequences from society
- Superego: moral component of personality that incorporates social standards about right/wrong. Emerges out of ego at 3-5 yrs and internalizes social norms. Can be irrational and demand moral perfection leading to excessive guilt

Levels of Awareness

- Freud recognized that unconscious forces influence behaviour (ex. dreams)
- 3 levels of awareness: conscious, preconscious, unconscious
- Conscious: whatever one is aware of at a particular point in time (ex. feel hungry/tired)
- Preconscious: material just beneath the surface of awareness, which can be easily retrieved (ex. what you wore yesterday, middle name)
- Unconscious: thoughts, memories & desires below conscious awareness that exert great influence on behaviour (ex. hidden feelings of hostility toward parent, repressed sexual desire)
- Compare to iceberg: unconscious (below surface) is larger than conscious/preconcious. Id is only unconscious where ego and superego are at all levels

Conflict and the Tyranny of Sex and Agression

- Freud thought behaviour was the outcome of ongoing conflicts b/w id, ego + superego as id wants to gratify urges immediately but ego/superego (social norms/morality) hold urge in check (ex. want to punch annoying co-worker but this is inappropriate)
- Freud thought conflicts about sex and aggressive impulses had great consequences because: (1) sex and aggression are subject to more complex, confusing social controls (inconsistent msgs on what's appropriate), (2) sex and aggressive drives are unfulfilled more regularly

Anxiety and Defense Mechanisms

- Most conflicts are trivial/quickly resolved but some linger causing internal tension
- Conflicts play out in the unconscious so people may not be aware of them but they can result in anxiety that sometimes comes to conscious awareness
- Anxiety is caused by your ego warning that (1) the id is out of control and is going to do something terrible, (2) the superego is out of control making you feel guilty
- Defence Mechanisms are used to get rid of anxiety. They are largely unconscious reactions that protect a person from unpleasant emotions such as anxiety and guilt:
    - Rationalization: creating false but plausible excuses to justify unacceptable behaviour (ex. stealing something because 'everyone does it')
    - Repression: keeping distressing thoughts/feelings buried in unconscious because they provoke feelings of guilt/anxiety (ex. traumatized soldier forgetting near death exper.). Have habit of avoiding –ve thoughts by distracting themselves with +ve memories
    - Projection: attributing one's own thoughts, feelings and motives to another (ex. woman dislikes her boss, thinks she likes her boss but boss doesn't like her). People gen'lly try very hard to suppress undesirable trait causing them to always label others with it
    - Displacement: diverting emotional feelings (usually anger) from their original source to a substitute target (ex. after parental scolding, girl takes anger out on younger sibling)
    - Reaction formation: behaving in a way that's the opposite of one's feelings (ex. guilt about sexual desire leads homophobic men to ridicule gays and avoid own desires)

- Regression: reversion to immature patterns of behaviour (ex. adult that has a 'temper tantrum' when they don't get their way)
- Identification: bolstering self esteem by forming an imaginary/real alliance with a person or group (ex. insecure man joins fraternity to raise self esteem/image)

Development: Psychosexual stages

- Psychosexual stages: dvlpmental periods with a characteristic sexual focus. Freud believed young children deal w/ immature but powerful sexual urges which shift in focus as child progresses through stages
- Freud thought each stage had its own unique dvlpmental challenges.
- Fixation occurs when one fails to move forward from a stage stalling dvlpment (caused by excessive gratification or frustration of needs). Leads to overemphasis on the psychosexual needs prominent during the fixated stage
- 5 stages:
  - Oral: 0-1 yrs, erotic stimulation in mouth (biting, sucking), handling child's feeding is important. Necessary to wean child from breast to bottle to prevent excessive eating/smoking in future
  - Anal: 2-3 yrs, erotic stimulation from bowel movements, toilet training attempts to regulate child's biological urges. Effects: excessive punishment may produce hostility towards trainer (usually mom → may lead to all females), any genital concerns may lead to anxiety about sexual activities in future
  - Phallic: 4-5 yrs, erotic stimulation from genitals (masturbation), develop Oedipal complex (boys)/Electra complex (girls): children have erotic desires for their opposite sex parent and feel hostile towards same sex parent. To combat this, child must purge sexual longing for opposite sex parent by crushing hostility towards same sex parent
  - Latency: 6-12 yrs, no erotic stimulation (repressed), child focuses on expanding social contacts beyond family
  - Genital: puberty onwards, erotic stimulation from genitals (sex) with sexual desires channeled towards peers of opp. sex instead of themselves

<u>Jung's Analytical Psychology</u>

- Carl Jung: middle class Swiss parents, introverted and lonely but an excellent student. Became psychiatrist and was friends with Freud initially
- Developed analytical psychology emphasizing unconscious determinates of personality
- Unconscious had 2 layers:
  - *Personal unconscious* houses material that is not within one's conscious awareness because it has been repressed or forgotten
  - *Collective unconscious* has hidden memory traces inherited from people's ancestral past
- Stated that everyone shared the collective unconscious and these ancestral memories were archetypes (emotionally charged images and thought forms that have universal meaning; manifest in art, books, religion – ex. many cultures used a magic circle as symbol of wholeness)
- Jung was first to describe introverted (inner directed; preoccupied w/ internal world of own thoughts/feelings) and extroverted (outer-directed; interested in external world of ppl/things)

<u>Adler's Individual Psychology</u>

- Adler: born into middle-class Jewish home, often sick and was overshadowed by older brother. Became doctor and was a part of Freud's inner circle (Psychoanalytic society)

- Developed individual psychology. Found that main source of human motivation is striving for superiority (means that it's a universal drive to adapt, improve oneself, and master life's challenges. Ex. children feel weak/helpless compared to adults and are motivated to get new skills and develop new talents)
- Adler felt everyone must work to overcome this feeling of helplessness through compensation. Compensation involves the efforts to overcome imagined or real inferiorities by developing one's abilities. If a person's inferiority feelings are excessive they may dvlp an inferiority complex (exaggerated feelings of weakness and inadequacy). This may cause them to overcompensate, by working to achieve status, gain power, acquire possessions of success, flaunt their success to ultimately cover up their inferiority. Problem with this is that people worry more about appearances than reality
- Adler also studied effect of birth order on personality. He stated that first borns, second borns etc. grow up in diff home environments and are treated differently by parents which affect their experiences/personality. Hypothesized that: only children are often spoiled by excessive attention from parents and first-borns are often problem children because they become upset when they're "dethroned" with birth of others
- Sulloway conducted studies on this and found first borns to be more conscientious/less agreeable and later borns to be more liberal/rebellious

Psychodynamic Perspectives

- Shown that unconscious forces can influence behaviour, internal conflict plays a key role in generating psychological distress, early childhood experiences can influence adult personality, people use defense mechanisms to reduce unpleasant emotions
- Criticisms: poor testability (ideas are too vague/conjectural to make a clear scientific test; no clear way to test theories), inadequate evidence (depend too heavily on case studies from clinical analysis' for evidence– may be biased), sexism (biased against women – Freud thought women's penis envy made them inferior to males and that women dvlped weaker super egos and were more prone to neurosis)

Behavioural Personality

- Behaviourism: theoretical orientation based on the premise that scientific psychology should study only observable behaviour; researched focused on learning

Skinner's Idea's Applied to Personality

- B.F. Skinner was an American psychologist researching pigons/rats at Harvard
- Showed little interest in internal personality because it can't be observed. Focused on how external environment shapes behaviour claiming personality is determined by enviro conditions
- Rebuttle for why people act the same is b/c they have stable response tendencies acquired through experience. They may change w/ new experiences but show a degree of consistency
- Viewed individual personality as a collection of response tendencies to diff situations

Personality dvlpmt as a product of conditioning

- Skinner felt human responses are shaped by operant conditioning (form of learning where people modify the occurrence and form of their behavior in accordance with the response they get from external stimulus. Ex. if a person tells a joke and it results in a +ve consequence (reinforcement) then they will likely do it again. If the joke results in a –ve consequence (punishment) their tendency to tell another joke will weaken
- This reinforcement/punishment determines a person's pattern of behaviour by strengthening/weakening their tendencies.
- This occurs throughout life so Skinner didn't break dvlpmnt into stages but assumed that conditioning works mechanically without a person's conscious participation

Bandura's Social Cognitive Theory

- Bandura became a psychologist and did research at Stanford on behaviour therapy/aggression
- Bandura added a cognitive aspect to behaviourism and called ideas 'social learning theory'
- He also believed behaviour was influenced by social learning, but argued that conditioning isn't mechanical because people aren't passive participants in behaviour but instead are self-organizing/regulating and proactive
- Emphasized directed planning where people set goals themselves, anticipate consequences and pick a course of action to get desired outcomes and avoid detrimental ones
- Advocates for 'reciprocal determinism' (internal mental events, external environment events and overt behaviour all influence one another) – enviro does shape behaviour but behaviour also shapes enviro. Also, personal factors (beliefs/expectancies) determine and are determined by enviro and behaviour

Observational learning

- When an organism's response is influenced by observing others (ex. you see your sister getting cheated on by BF so you're less trusting of people)
- Peoples characteristic patterns of behaviours are shaped by models they're exposed to (model = person whose behaviour is observed by another); response tendencies dvlp through imitation
- Some models are more influential than others: more likely to imitate people you respect, are considered attractive/powerful, is similar in nature, if model's behaviour leads to +ve outcomes

Self Efficacy

- One's belief about their ability to perform behaviors that should lead to expected outcomes (if high, person is confident they can act in a way that gets their desired outcome. If low, person worries that the desired outcome they want is out of their control)
- Perceptions of self-efficacy influence which tasks people tackle/how they perform (High self-efficacy has been associated with greater success in giving up smoking, adherence to exercise, success in coping with rehabilitation, reduced disability from chronic pain, greater persistence in academic pursuits, reduced vulnerability to anxiety and depression, less jealousy, enhanced athletic performance, greater receptiveness to technological training, success in job searching, high work-related performance, etc)

Mischel and the Person-Situation Controversy

- Walter Mischel was a colleague of Bandura's and advocated the social learning theory
- Focused on how situations influenced behaviour. Stated that people tried to gauge what rewards would be offered and would adjust their behaviour accordingly (ex. possible raise/promotion = hardworking, no chance of promotion = lazy/irresponsible)
- Concluded that people exhibit very inconsistent behaviours across situations (ex. shy in one place but outgoing in another) maintaining that behav. is characterized by situations
- Researchers didn't like this; with no consistency, there's no need for concept of personality
- Critics stated that he studied young people (whose personality hadn't fully formed) and that it was hard to compare situations b/c some traits are more easily expressed in certain situations
- Debate has lead to a growing recognition that personality traits interact with situational factors to produce behaviour

Evaluating behavioral perspectives

- Behavioural ideas are rooted in empirical research instead of clinical studies
- Criticisms: (1) overdependence on animal research: principles based on rat research and generalized to human behaviour, (2) dehumanizing nature of radical behaviourism: some

theories deny importance of free will/cognitive processes, (3) fragmentation of personality: no unifying structures that tie personality together, instead behaviour theories associate diff traits based on stimulus and responses

Humanistic Perspectives

- Humanistic theory was created b/c Freudian + behavioural theories were dehumanizing
- Humanism: theoretical orientation that emphasizes unique human qualities (especially freedom and potential for personal growth)
- Take an optimistic view of human nature assuming: (1) people can rise above their primitive animal heritage and control biological urges, (2) people are conscious/rational beings not dominated by unconscious, irrational needs/conflicts, (3) people's subjective view of the world is more important that objective reality
- Use phenomenological approach: assumes one has to appreciate a person's personal, subjective experiences to truly understand their behaviour

Roger's Person-Centered Theory

- Pioneered by Carl Rodgers. Theory emphasizes self-realization by fostering personal growth

The Self

- Viewed personality in terms of one's self-concept (a collection of beliefs about one's own nature, unique qualities, and typical behaviour – how you see yourself)
- People are aware of their self concepts but it's subjective; might not be consistent w. actual experiences. People may distort their experiences to promote a favorable self-concept (ex. think you're smart but get bad grades).
- Degree of disparity b/w one's self concept and actual experiences is called 'incongruence'
- Too much incongruence undermines a person's psychological well-being

Development of Self

- Rogers studied how childhood situations promoted incongruency
- He found that people need affection, love and acceptance which parents provide in early life
- If love is conditional (dependant on if child behaves well/meets expectations), child will alter self-concept and remove exp. that make them feel unworthy of love; this fosters incongruency
- If love is unconditional, children don't need to alter self-concept to block out unworthy experiences; fosters congruence

Anxiety and Defence

- Experiences that threaten a person's view of themselves creates anxiety
- People with incongruent self-concepts have more anxiety because they are more likely to have experiences that don't match their self-concepts
- To get rid of anxiety, people behave defensively and reinterpret experience (ignore, deny, twist reality) to make it consistent with their self-concept (ex. selfish girl thinks she's nice. If told she's a brat by her friend, she believes the friend is jealous of her looks)

Maslow's Theory of Self Actualization

- Maslow created a theory of motivation analyzing how motives were org. hierarchically

Hierarchy of Needs

- Systematic arrangement of needs, according to priority, where basic needs must be met before less basic needs are aroused
- Physiological (hunger,thirst)→ Safety/security (LT survival) → Belongingness + love (affiliation/acceptance) → Esteem (achievement, recognition) → Cognitive (knowledge, understanding) → Aesthetic (order/beauty) → Self actualization (realizing potential)
- Needs portrayed in a pyramid. When a person satisfies needs at a lower level reasonably well, this satisfaction activates needs at the next level

- Maslow found humans have an innate drive for personal growth (evolution towards higher state of being) and describe upper level needs as 'growth needs'
- Highest need is self-actualization (need to fulfill one's potential)

Healthy Personality

- Self-actualizing ppl have extremely healthy personalities marked by continued personal growth
- Traits of self-actualizing ppl: tuned into reality, at peace w. themselves, open, spontaneous and appreciate world, sensitive to others, enjoy rewarding interpersonal relations, don't depend on other's approval, comfortable w. being alone, have more emotional highs than others, have a good balance of different polarities in personality (ex. can be childish and mature)

Evaluating humanistic perspectives

- Could argue the humanistic approach laid foundation for +ve psychology movement
- Criticisms: (1) poor testability - don't generate specific, testable hypothesis b/c concepts (ex. personal growth) are hard to measure; (2) unrealistic view of human nature - unrealistic assumptions about 'healthy personalities' (ex. maslow's self actualizing people were defined to be nearly perfect and it was difficult to find actual people like this); (3) inadequate evidence – studies weren't research oriented

Biological Perspectives

Eysenck's Theory

- Viewed personality as a hierarchy of traits where a few fundamental higher order traits determine a small number of basic traits which determine many superficial traits
- States that all personality emerges from 3 higher-order traits: extroversion (social, assertive, active, lively), neuroticism (anxious, tense, moody, low in self-esteem), psychoticism (egocentric, impulsive, cold, antisocial)
- Each trait is represented in the theory as a bipolar dimension b/w extroversion-introversion, neuroticism-stability and psychoticism-self control
- Thought personality was determined by genes and some people could be conditioned more easily b/c of differences in physiological functioning

Behavioural genetics and personality

- Studies show that the "Big Five" personality traits are more similar in identical twins compared to fraternal twins
- Critics stated enviro influence may have caused this. But, studies examining identical and fraternal twins reared apart show that Big Five are still more similar amongst identical twins
- So, genetic factors exert considerable influence on personality (heritability estimate ranges from 40-58% depending on the specific trait) while family environment has little impact
- Led some to think parents don't matter; that they have little influence over child's dvlpmt
- Yet parents do affect behaviour b/c children raised in the same household can be very different. This is b/c they don't always exp. the same things and may be treated differently (birth order, gender, etc). Also, temperamental differences in children may evoke differences in parenting

Evolutionary Approach to Personality

- Theorists state personality has a biological basis since natural selection favoured certain traits
- Focus on how personality traits may have contributed to reproductive fitness
- The Big Five are important dimensions of personality b/c they had significant adaptive implications. Since humans depended heavily on groups, being able to judge and

understand ppl's individual diff was a big advantage (ex. judge who would be a good group member)
- Therefore, we evolved special sensitivity to variations in: the ability to bond with others (extraversion), willingness to cooperate/collaborate (agreeableness), tendency to be reliable and ethical (conscientiousness), capacity to innovate, solve problems (openness), ability to handle stress (neuroticism)
- Traits also have adaptive value (extroversion inc. mating success, neuroticism inc. competition)

Evaluating Biological Perspectives
- Genetic researchers have focused heavily on heritability coefficients but these will vary according to samples/population – there is no one single %
- Currently no comprehensive biological theory that provide a good overview of how biological factors govern personality structure/development

Terror Mgmt Theory
- Psychological consequences of the 'juxtaposition (combination) of a biologically rooted desire for life with the awareness of the inevitable death'
- Theory explains how humans have tried to solve this problem; can lead to paralyzing terror

Essentials of Terror Mgmt Theory
- Tries to explain why people need self esteem
- Humans have complex cognitive abilities permitting self awareness, thinking about future, awareness of inevitable death (creates potential anxiety, alarm, terror)
- People deal w. terror through culture. Cultures provide ways to view the world and dec. anxiety by providing answers to questions (ex. why am I here? Meaning of life?). Cultures create stories, traditions and institutions giving members a sense that their participation in family/school/job was part of a legacy. Culture gives life order and meaning and helps soothe anxiety of death
- Self esteem is a sense of personal worth dependant on one's confidence in the validity of their cultural worldview and the belief that they are living up to standards within worldview. Helps a person feel like they're contributing to a meaningful universe. In this way, self esteem serves as an anxiety buffer. When ppl think of morality, they act in ways that boost their self esteem

Applications of Terror Mgmt Theory (Research)
- #1: Morality salience – ask participants to think about death
  - When ppl are reminded of death, they feel the need to defend their cultural worldview. Causes them to hand out harsher penalties to criminals, respond –vely to ppl who criticize their country, show more respect for cultural icons (flag)
  - Also may fuel prejudice as ppl give more –ve evaluations of ppl from diff racial/ethnic backgrounds, have more stereotypic thinking about minorities
- Theory states our behaviour is fuelled by our need to defend our culture and preserve our self-esteem (ex. ppl are materialistic to show they're special and not just fated to die; ppl vote for charismatic election candidates b/c they make ppl feel like they're part of an important mvmt)
- Also shows that behaviour is influenced by bodily concerns which may remind people of their ultimate mortality. Could lead to suppression of sexual urges, inhibition of health protective measures (ex. breast exam for women)
- Terrorist attacks are intended to produce powerful, nationwide manipulation of mortality salience. Causes an increase in ppl embracing their cultural worldviews and ppl to be less tolerant of opposing views/prejudiced towards people who are diff (ex. After sept 11th,

expressions of patriotism/religious faith increase dramatically, individuals who questioned government policies were met with more hostility)

Culture and Personality

- Want to do research to determine if Western personality constructs are relevant to other cultures and cultural diff can be seen through specific personality traits
- Research shows the big 5 traits usually emerge when administered and subjected to factor analysis in other cultures so the basic dimensions of personality structure may be universal
- But, there may be some variation in average trait scores (ex. Brazilians scored higher in neuroticism, Australians in extraversion) but these were preliminary findings; more data needed
- In terms of national character (what a typical member of a culture would describe themselves as) researchers found little to no relationship between perceptions of national character and actual trait scores for various cultures showing that stereotypes are usually very inaccurate
- Comparison of American vs. Asian conceptions of self:
    - American: taught to be self-reliant, independent, define themselves based on attributes/skills/accomplishments; have an individual view of themselves
    - Asian: emphasizes connections b/w people, taught to rely on family/friends, be modest about personal accomplishments and view themselves as a part of a larger collective
- Differing self views may lead to cultural diff in self-enhancement. Self enhancement involves focusing on positive feedback from others, exaggerating one's strengths, and seeing oneself as above average. It is common in Western cultures, but rare in Asian cultures where norm is to be more sensitive to negative feedback, reflect on shortcomings and find avenues for improvement (self-criticism)
- Self criticism may lead to lower self-esteem, but low self-esteem may not have the same significance in a interdependent self-system (in Japan, low self-esteem does not correlated with subjective well being)

Chapter 13: Stress Coping and Health

- Stress is a part of our everyday lives (1/5 Cdn adults report most of their days are stressful, 40% of uni students experience high stress during exam times and deal with it through exercise, over-eating and over-sleeping. For this reason, many uni's hold "stress buster" events to help students deal)
- Relationship b/w stress and physical illness led to dvlpmt of biopsychosocial model of health: states that physical illness is caused by a complex interaction of biological, psychological and socio-cultural factors. New model created b/c of the changing patterns of illness (before main threat to health was contagious diseases, now its chronic diseases – heart disease, cancer etc.)
- Health psychology: concerned w/ how psychosocial factors relate to the promotion + maintenance of health and with the causation, prevention and treatment of illness

Nature of Stress

- Stress: any circumstances that threaten one's well being and therefore tax one's coping abilities
- When people think of stressful events, they think of traumatic crises (ex. floods, hurricanes) but stress happens in minor problems in life (ex. waiting in line, loosing cheque book, car trouble)
- Major stressful events (ex. divorce) can lead to minor stressors (ex. opening new bank acct)
- How an individual responds to stress depends on: (1) type of stressor, its controllability, (2) biological factors (age, gender), (3) person's previous experience w. stress
- Studies show routine hassles can have sig. harmful effects on mental/physical health because stress is cumulative (indiv. events may create small stress but together it creates a lot of strain)
- Feeling stressed depends on what events one notices and how one chooses to appraise/interpret them (ex. 1st date might be fun for someone and terrifying for another)
- Anxious, neurotic people may tend to be more stressed than others
- Peoples appraisals of stressful events are highly subjective (stress lies in the mind of the person)

Major types of stress

- Acute stressors: threatening events that have short durations and clear end pts (ex. exam, dentist appt)
- Chronic stressors: threatening event that have long durations w. no apparent time limit (ex. persistent financial problems, problems with boss)
- 4 major types of stress: frustration, conflict, change and pressure
- Frustration: occurs when the pursuit of a goal is thwarted; when you want something you can't have (ex. traffic jams, someone you wanted to marry breaking up with you). Can cause anger/aggression but is usually brief and insignificant. Failure/loss is especially frustrating
- Conflict: occurs when 2+ incompatible motivations/behavioral impulses compete for expression. Creates internal conflict which can lead to anxiety, depression, physical symptoms. 3 types:
    - Approach-approach: choice must be made b/w 2 attractive goals (ex. play tennis or golf?). Usually the least stressful w. happy endings. Can be very stressful if it's an important issue (ex. choosing b/w uni's) b/c whatever isn't chosen represents loss
    - Avoidance-avoidance: choice must be made b/w 2 unattractive goals (ex. deal w. back pain or get dangerous surgery). Usually unpleasant, highly stressful
    - Approach-avoidance: choice must be made about whether to pursue a single goal that has attractive and unattractive aspects (ex. offered a promotion in another city,

risk rejection asking out a girl). Usually common and can be very stressful. Causes 'vacillation' (indecisive, going back and forth b/w options)

- Change: life changes are any noticeable alternations in one's living circumstances that require readjustment (ex. changes in personal relationships, changes at work, etc); can be stressful even when they are positive, welcomed changes. Holmes and Rahe dvlpd a Social Readjustment Rating Scale (SRRS) to measure life change as a form of stress. Scale assigns number values to 43 mjr life events and asks participants to indicate how many they've experienced. #'s are added and show the amt of change related stress the person has recently experienced. People with higher scores, tend to be more vulnerable to many kinds of physical illness and psychological problems. Critics argue SRRS doesn't measure change exclusively b/c events on list are mostly negative and stress inducing (ex. death of a spouse, divorce)
- Pressure: expectations that one behave in a certain way. Usually under pressure to perform (ex. comedians must make people laugh) or conform to other's expectations (ex. dress in certain ways)
- Weiten devised a scale to measure pressure as a form of life stress. It assesses self-imposed pressure, pressure from work/school and family/friend/intimate relationships. Pressure was strongly related to psychological symptoms (even more than SRRS). Research shows pressure related to academic pursuits may undermine performance or lead to escape behaviours (drinking, eating, procrastination, etc) but that it's self imposed (put pressure on yourself to achieve) meaning people have more control over a substantial portion of their stress

Responding to stress

- Stress process: potentially stressful event (major exam) → subjective cognitive appraisal (perception of threat influenced by event's familiarity, controllability, predictability etc) → response: emotional (anger, fear etc), physiological (hormone change etc.), behavioural (coping)

Emotional

- Common emotional responses: anger, annoyance, rage, apprehension, anxiety, sadness, fear etc
- Researchers have found links b/w specific cognitive reactions to stress and emotions (ex. self blame leads to guilt, helplessness to sadness)
- Stress is usually associated w. –ve emotions but can also create +ve ones (ex. after 9/11, people reported gratitude for the safety of loved ones and renewed love for family/friends)
- +ve emotions don't vanish in stressful times. They play a key role in helping ppl recover from difficult situations.
- +ve emotions promote resilience shown through 'broaden and build theory' of +ve emotion:
    - +ve emotions can alter people's mindsets, broadening their scope of attention, and increasing creativity and flexibility in problem solving.
    - They can undo the lingering effects of negative emotions reducing negative effects.
    - They can promote rewarding social interactions that help to build valuable social support, enhance coping and personal resources
- +ve emotions also promote healthy coping responses, initiate upward spirals in emotional well-being, increase mental health and are associated with an enhance immune response

Effects of emotional arousal

- Emotional response is natural. Can serve as warning signs that one needs to take action. But strong emotional arousal can interfere with efforts to cope with stress by impeding attn/memory retrieval and impairing judgement/decision making

- Emotions can help with task performance in some cases though. The inverted-U hypothesis states task performance should improve with emotional arousal, up to a point, after which further increases in arousal become disruptive and deteriorate performance. The level at which performance peaks is called the "optimal level of arousal' for a task
- Optimal level of arousal depends on the complexity of a task. As a task becomes more complex, the optimal level of arousal decreases
- U hypothesis provides a good model of how arousal can help/hurt stress coping effects

Physiological

Fight or Flight

- A physiological reaction to a threat in which the autonomic nervous system (sympathetic division) mobilizes the organism for attacking (fight) or fleeing (flight) an enemy.
    - Autonomic nervous system controls blood vessels, smooth muscles and glands
- Research w. cats/dogs showed cats had an inc. in breathing/heart rate and reduction in digestive processes when confronted w. dog
- In humans, this response is an adaptive instinct that came from our evolutionary past in animals where a quick response is required; now most stress can't be dealt w. through fight/flight
- Also, fight/flight model may be diff b/w sexes. Since women have more responsibility caring for offspring, the fight/flight response might now work as both responses endanger offspring reducing the likelihood of the animal passing on its genes. So, women have a 'tend and befriend' response where they put more effort into caring for offspring and seeking help and support

General Adaptation Syndrome

- Hans Selye exposed animals to various stressors (ex. heat, cold, pain, restraint) and found that physiological arousal caused by stress was the same regardless of the type of stress. Concluded stress reactions are non specific (do not vary according to specific type of stress encountered)
- Formulated "General Adaptation Syndrome" theory: model of the body's stress response with 3 stages:
    - Alarm – when organism realizes a threat exists. Arousal: body gathers resources to face threat (fight or flight response)
    - Resistance – happens if stress is prolonged. Causes physiological change to stabilize as coping efforts get under way. Arousal may be heightened but then levels as organism gets used to threat
    - Exhaustion – if stress occurs for a very long pd of time. Causes body's resources in fighting stress to be limited. If stress can't be overcome, resources are depleted

Behavioral responses

- Behavioral responses involve coping: active efforts to master, reduce or tolerate the demands created by stress (may be adaptive or maladaptive – ex. if you find out your failing a class you can get a tutor or drop the class)
- Usually people have similar styles of coping with situations
- Coping inventory for stressful situations (CISS) measures 3 stable coping dimensions: task oriented, emotion oriented and avoidance oriented

Giving up

- When ppl give up responding to stress w. fatalism/resignation and accept setbacks
- Called learned helplessness: passive behaviour produced by exposure to unavoidable aversive events. Occurs when indiv. believe events are beyond their control (behavioral disengagement)
- Not a good coping strategy b/c it's been shown to inc. distress and can lead to depression

- New research shows that it might not always be bad. When people struggle to pursue goals that can't always be attained, it makes sense to cut their losses and disengage from goal. People who can successfully disengage from unattainable goals have better health (less inflammation) and lower stress

Blaming oneself

- Tendency to become highly self-critical; called "catastrophic thinking"
- Causes, aggravates and perpetuates emotional reactions to stress that are often problematic
- Repeated –ve self-talk may contribute to depression w. self blame being very unhealthy

Striking out at others

- Aggression: behaviour intended to hurt someone (verbally or physically)
- Scientists proposed the frustration-aggression hypothesis stating that aggression is always caused by frustration. Research supports this, but frustration isn't only cause
- People sometimes lash out at ppl who aren't the direct cause of their frustration b/c they can't vent anger to actual source (ex. angry at boss → get mad at kids). Freud called this displacement
- Freud theorized that aggression could get built up emotion out of one's system and be adaptive. Called catharsis which is a release of pent-up emotional tension
- Research shows catharsis is rare b/c ppl who fall victim to aggressive behaviour feel need to agress back so interpersonal conflict emerges and inc. stress

Indulging oneself

- Sometimes stress causes ppl to lose control and self-indulge causing them to engage in excessive consumption (over eating, drinking, smoking, spending money etc.)
- People try to compensate for the stressful or unsatisfactory aspects of their life by pursing substitute forms of satisfaction
- Recent studies show that people tend to immerse themselves in the online world through an internet addiction. This occurs when people spend an inordinate amount of time on the Internet and can't control their use. People who have an internet addiction are anxious, depressed, or feel empty when not online which causes interferences with a person's daily functioning at school/work/home etc.

Defensive coping

- Defense Mechanisms – DM- (dvlpd by Freud) are largely unconscious reactions that protect a person from unpleasant emotions such as anxiety and guilt
- More types:
    - Denial – refusing to accept unpleasant reality (ex. smoker thinks smoking won't lead to health problems)
    - Fantasy – gratifying frustrating desires through imaginary achievements (ex. nerdy boy imagines a hot girl going out w. him)
    - Intellectualization (isolation) – cutting off emotion from hurtful situations (ex. prisoner on death row resists appeal on his behalf and suggests the law should be followed)
    - Undoing – trying to dispel unacceptable acts
    - Overcompensation – covering up weakness by overemphasizing certain things; making up for frustrating sit. through overgratification in another area (ex. overeating after being neglected by spouse)
- DM shield ppl/ reduce intensity of emotional discomfort caused by stress. Used to suppress anxiety, guilt, dejection and anger
- DM work using self-deception. They distort reality so it doesn't appear threatening (ex. if you might fail a test, you might use *denial* to block out possibility of flunking)
- DM can occur at multiple levels of awareness – both conscious and unconscious

- Everyone uses DM on a regular basis as they're normal patterns of coping
- But, using defensive coping is not optimal b/c (1) it's an avoidance strategy so it doesn't provide a sol'n to the problem (2) it's related to poor health since ppl delay facing up to their problems (ex. denial of cancer could be fatal), (3) some DM like denial/fantasy represent wishful thinking which doesn't accomplish anything
- But, research shows that ppl who create 'positive illusions' may be adaptive for mental health/well being. "Normal" ppl have overly favorable self-concepts, overestimate the amt of control they have in chance events and are more likely to display unrealistic optimism about future events. Depressed ppl have more realistic, less favorable self-concepts, feel less control in chance events and aren't as optimistic about the future
- Although studies are controversial, they show there is an optimal margin of illusion where extreme distortions of reality are bad but small illusions are beneficial

Constructive Coping

- Healthful efforts that people make to deal with stressful events (doesn't guarantee success)
- Involves confronting problems directly. It's task-relevant and action-oriented so ppl must make a conscious effort to rationally evaluate options to try and solve problems
- Based on realistic appraisals of stress and coping ability
- Involves learning to recognize (and inhibit) potentially disruptive emotional reactions to stress
- Involves ensuring your body is not especially vulnerable to the damaging effects of stress

Effects of Stress on Psychological Functioning

- When stress is severe/demands pile up, it can affect psychological functioning

Impaired task performance

- Stress can dec. the ability of a person to perform well on a task
- Pressure to perform makes people self-conscious which disrupts their attn causing them to 'choke' under pressure (found true in studies w. sports, math problem solving etc.)
- In another study, stress was found to alter 2 of 3 aspects of attn inc. subject's tendency to: (1) jump to a conclusion too quickly w/out considering all other options, (2) do an unsystematic, poorly organized review of available options
- Other study found that stress impairs performance in cognitive tasks b/c it makes it harder for people to suppress competing thoughts and –vely affects memory functioning

Burnout

- Physical and emotional exhaustion, cynicism and a lowered sense of self-efficacy that can be brought on gradually by chronic work-related stress
- Exhaustion involves chronic fatigue, weakness and low energy. Cynicism involves highly negative attitudes toward oneself, one's work and life in general. Reduced self-efficacy involves declining feeling of competence at work, which leads to a feeling of hopelessness and helplessness
- Associated with reduced productivity, increased absenteeism and increased vulnerability to a variety of health problems
- Causes: work overload (too many demands during work hrs), struggling w. interpersonal conflicts at work, lack of control over work responsibilities/outcomes, inadequate recognition for one's work, fear of job loss, risk of injury

Post traumatic stress disorder

- Enduring psychological disturbances which occur after experiencing a major traumatic event
- Became better known after Vietnam War. Now inc. associated with people in other front-line occupations (ex. firefighters, police officers, transit workers, paramedics)

- It can happen to anyone who suffers trauma (ex. sufferers of rape/assault, seeing a death etc.)

Psychological problems and disorders

- Chronic stress can contribute to psychological problems (poor academic performance, insomnia, sexual difficulty, substance abuse) and disorders (depression, schizophrenia, anxiety)

Positive effects

- Research suggests that stressful situations promote resiliency and allow for personal growth and self-improvement
- Stress can force people to develop new skills, re-evaluate their priorities, learn new insights and acquire new strengths so adaptive change may have +ve outcomes
- Conquering stress may lead to improvements in coping abilities and an enhanced self-concept
- Even if you do not conquer stressor, you may be able to learn from your mistakes

Effects of stress on physical health

- Adults who suffered high stress had a higher prob. of getting an illness (ex. arthritis, heart disease)
- In the 50's, people believed in psychosomatic diseases: genuine physical ailments that were thought to be caused by stress/other psychological factors. Effects included high BP, ulcers, asthma, skin disorders etc. This disease was viewed as authentic (not just dreamed up)
- Now this term isn't used b/c stress has been linked to contributing to many diseases

Type A Personality, Hostility and Heart Disease

- Heart disease is one of the leading causes of death in North America
- Coronary heart disease is a reduction in blood flow in the coronary arteries, which supply blood to the heart; accounts for 90% of heart-related deaths. Heart disease is principal cause of heart disease which is the narrowing of coronary arteries from a buildup of fatty deposits/debris
- When the narrow coronary artery is blocked completely (ex. by blood clot), the interruption of blood flow can produce a heart attack
- Contributors to atherosclerosis: smoking, no exercise, high cholesterol, high BP, inflammation
- Doctors have now found a marker (C-reactive protein) that helps estimate level of coronary risk
- In the 1970's, cardiologists found a connection b/w coronary risk and "Type A personality"
- Type A personality includes: (1) strong competitive orientation, (2) impatience and time urgency, (3) anger and hostility. Type A people are ambitious perfectionists who are exceedingly time-conscious, often try to do several things at once, and fidget frantically over delays. They are highly competitive, achievement oriented workaholics who drive themselves within many deadlines. They are easily irritated and angered
    - Contrast is Type B which is marked by relaxed, patient, easygoing, amicable behaviour. Type B's are less hurried, less competitive and less easily angered
- Precocity-longevity hypothesis found that ppl w. early career achievement due to Type A behaviour died earlier due to stress related health problems
- Studies now show a modest correlation b/w Type A behaviour and inc. coronary risk but there's an even stronger correlation b/w anger + hostility which is an effect of Type A behaviour
- In a study, subjects with angry temperament had 3x as many coronary events than low anger ppl

Emotional reactions, depression and heart disease

- Research shows that short-lived mental states and the resulting emotions that people experience can tax the heart. Researchers wanted to find out if strong emotional reactions might trigger heart attacks in individuals w. coronary disease. They found that brief periods of mental stress can trigger acute symptoms of heart disease
- Mental stress can trigger elicit cardiac symptoms and temporary inc. inflammation
- There is also elevated rates of depression (persistent feelings of sadness/despair) among patients suffering from heart disease. New studies show that depression causes heart disease, not the other way around as expected. Depression doubles chances of dvlping heart disease, influences how it dvlps

Stress, other diseases and immune functioning

- Stress has been documented to be associated with a plethora of illnesses, including: AIDS, Appendicitis, Asthma, Cancer, Chronic back pain, Common Cold, Diabetes, Herpes virus, Hypertension, Multiple Sclerosis, Arthritis, Stroke, Vaginal Infections, etc.
- As stress is linked to so many diseases, researchers think it may undermine immune functioning.
- Immune response is the body's defensive reaction to invasion by bacteria, viral agents, or other foreign substances; depends heavily on lymphocytes (white blood cells)
- Studies show stressors (ex. crowding, shock, restraint) impair immune functioning in animals
- In humans, research found dec. immune functioning and higher scores on SRRS during high stress activities (ex. 'finals week')
- Research also shows that acute/chronic stressors may have diff effects on immune functioning. Chronic stress can reduce cellular immune response (attack intracellular pathogens, such as viruses) and humoral immune response (attack extracellular pathogens, such as bacteria)
- Duration of stress helps determine effect on immune function. Long lasting stressors lead to greater immune suppression and may produce premature aging of immune system cells

Sizing up link b/w stress and illness

- Research shows stress contributes to causation of illness. But it is all correlational so we can't conclude that stress causes illnesses
- Currently, relationship b/w stress and illness is modest (0.20-0.30) so stress is only a contributor to illness – but it may be related to many other factors (ex. nutrition, genetics)

Moderating impact of stress

Social support

- Various types of aid and emotional sustenance provided by members of one's social networks
- Correlations show that high social support is linked to greater immune functioning and low social support (lonely, isolated) is linked to reduced immune functioning
- High social support also helps reduce mortality; ppl w. richer friendship networks live longer. This is b/c social support acts as a protective buffer in high stress pds, reducing –ve impact of stressful event
- Strong connection w. community also helps improve physical and mental health
- Effects of social support may be a function of culture. Those from a culture emphasizing community and interdependence may benefit more from emotional social support
- Note: social bonds are not the same as social support as some ppl in social circle cause stress and social conflicts can increase susceptibility to illness

Optimism

- Gen'l tendency to expect good outcomes

- Optimism correlated w. good physical health, effective immune functioning, better stress coping mechanisms (more action-oriented, problem-focused coping, more willing to seek social support, more likely to emphasize the positive in stressful events)
- Studies show correlations b/w those w. an optimistic explanatory style and good health, increased longevity, academic achievement, job productivity, athletic performance and marital satisfaction
    - Optimistic explanatory style: ppl attribute setbacks to temp situational factors
    - Pessimistic explanatory style: ppl attribute setbacks to personal shortcomings

Conscientiousness

- Predicts greater longevity as conscientious people tend to gravitate towards healthy environments and show less reactivity to stress
- Main diff is that conscientiousness fosters better health habits as ppl are less likely to have unhealthy habits such as drinking, drug abuse, smoking, overeating, risky sexual practices

Health impairing behaviour

Smoking

- Smoking is widespread but declining (now 20% men smokers and 17% female smokers)
- Smokers face a greater risk of premature death w. life expectancy 13-14 years shorter
- Risk of death is correlated w. # of cigarettes smoked and their tar/nicotine content
- Smokers have higher mortality rates as smoking inc. likelihood of dvlping diseases including: lung cancer, heart disease, cancer, stroke, etc.
- Most smokers know risk of smoking but underestimate the actual risks as applied to themselves
- Danger of smoking also affects family members/friends who are subject to second hand smoke or environmental tobacco smoke (creates inc. risk of cancer, heart disease etc.)
- If ppl give up smoking, their health risks decline reasonably quickly. But smokers don't want to quit as smoking is pleasurable, or they're worried about cravings, gaining weight, being irritable, not coping well w. stress
- Long term success of quitting is only about 25% and many fail several times before they succeed
- Readiness to give up smoking builds gradually as ppl cycle through pds of abstinence and relapse

Poor nutritional habits

- Heavy consumption of foods that elevate serum cholesterol level (eggs, cheeses, butter, etc) may increase the risk of cardiovascular disease
- Vulnerability to cardiovascular diseases may also be influenced by other dietary factors: low fibre diets, high intake of red and processed meats, sweets, potatoes, and refined grains.
- Omega 3 fatty acids found in fish and fish oils offer some protection against coronary disease
- High salt intake and caffeine consumption may contribute to hypertension (still debating)
- High-fat diets may contribute to some forms of cancer (ex. prostate, colon, breast) while high-fiber diets may reduce risk for colon and rectal cancer
- Inadequate calcium may increase vulnerability to osteoporosis (abnormal loss of bone mass)

Lack of exercise

- Lack of exercise/sedentary lifestyle is linked to poor health and obesity while regular exercise is associated with increased longevity
- Exercise programs can enhance cardiovascular fitness and reduce risk of heart problems
- Exercise may indirectly reduce risk for obesity-related problems such as diabetes
- Exercise can help diminish chronic inflammation

- Exercise can serves as a buffer against the damaging physical effects of stress as ppl with high fitness levels react less physically to stress
- Studies show physical activity is declining in kids which is concerning b/c this may inc. chance of disease, obesity
- Exercise can also facilitate generation of new brain cells (neurogenesis)

Alcohol and drug use

- Drugs can kill directly/immediately through an overdose or through impairment causing an accident
- Drug use can also elevate risk for infectious disease, respiratory/cardiovascular/liver disease, stomach problems, pregnancy complications etc.
- Greatest damage is caused by alcohol which is the only legal drug

Behaviour and AIDS

- AIDS (*acquired immune deficiency syndrome)* is a disorder in which the immune system is gradually weakened and eventually disabled by the human immunodeficiency virus (HIV).
- AIDS is the final stage of the HIV infection process where one is left defenceless against infectious agents. AIDS inflicts its harm indirectly by opening the door to other diseases
- Symptoms may vary depending on which disease on gets but worldwide prevalence cont. to inc.
- Avg. length of survival was 18-24 mths but now with HAART (highly active antiretroviral therapy) survival is prolonged. But drugs were rushed into use/haven't fully been tested. Also, drugs haven't cured disease so HIV is not manageable. Other problems: HIV strains dvlped immunity to drug, some patients don't respond well to drug, some patients can't stick to drug regimen

Transmission

- Transmitted through person-to-person contact through the exchange of bodily fluids (usually semen and blood – happens during sex or through sharing drug needles)
- More commonly transmitted b/w homosexual men and from men to women (8x more likely)
- Virus can also be found in tears and saliva but concentrations are low and there's no evidence that infection can be spread through casual contact. Even non-casual contact (kissing, hugging, sharing food) seems to be safe

Misconceptions

- People have unrealistic fears that AIDS can be transmitted through casual contact (worry they may get it from a handshake, sneeze or eating utensil). Usually paranoid about interacting with homosexuals (fuels discrimination) and donating blood (AIDS can be transmitted through IV's)
- On the other hand, many young heterosexuals downplay their risk for HIV and think they're safe if they avoid IV drug use and sex with gay/bi men
- Since AIDS is accompanied by discernible symptoms, many people believe that sexual partners who carry the HIV virus will exhibit signs but many carriers do not even know themselves (in a study of 5000 men, 77% didn't know they were HIV +ve)

Prevention

- Reduce # of sexual partners, use condoms to control exchange of semen
- Be cautious of risky sexual behaviour (happens with inc. alcohol use, -ve mood and low self esteem)

Development of health impairing behaviour

- Health-impairing habits can creep up slowly (ex. slow decline of exercise)
- Many health-impairing habits involve activities that are pleasant at the time (ex. overeating)

- Risks associated with most health-impairing habits are chronic diseases that take a while to develop (occur in 10/20 yrs) so people ignore potential future effects
- People gen'lly underestimate the risks of their own bad habits while viewing the risks associated with others' self-destructive behaviors much more accurately (don't apply risks to themselves)

Reactions to illness

Deciding to seek treatment

- Our view of our bodily sensations as *symptoms* is up to our own individual interpretation (ex. when 2 ppl feel same unpleasant sensation, one may disregard it but other may go to doctor)
- People w. high anxiety, neuroticism and attn to bodily sensations report illness more
- The degree of seriousness/disruptiveness of symptoms affects reporting of illnesses
- Gender, income level, and residence (city/farm) also may play a role (ex. city-dwelling women with higher incomes are more likely to visit a physician or specialist)
- Biggest issue is ppl delay consultation. Bad b/c early diagnosis and quick intervention allows for more effective treatment
- People delay treatment b/c: (1) misinterpret/downplay significance of symptoms, (2) worry about looking silly if the problem turns out to be nothing, (3) worry about "bothering" doctor, (4) reluctant to disrupt own plans, (5) waste time on trivial matters (taking a shower, gathering personal items, packing clothes, etc) before going to a hospital emergency room

Communicating with health providers

- Many patients leave doctor confused not knowing their diagnosis/what they have to do
- Bad b/c good communication is crucial for making sound medical decisions, informed choices about treatment, and appropriate follow-through by patients
- Barriers to communication: (1) visits are very quick with little time for discussion, (2) doctors use too many technical terms patients can't understand, (3) anxious patients may forget to report symptoms/ask questions, (4) other patients may not voice all symptoms in fear of a serious diagnosis, (5) patients might not want to challenge doctors' authority or are too passive in interaction w. providers
- To improve communication: individuals can't be passive consumers of medical services. They must arrive on time, have prepared questions/concerns, be accurate and honest in responding to questions, ask for clarification if you're confused, voice doubts about recommendations

Adhering to medical advice

- Non-adherence to medical advice may occur 30-60% of the time (patients may not start treatment, may stop early, reduce or inc. levels of treatment or be inconsistent)
- Resistance to proper treatment can be bad b/c if doctor doesn't see improvement they may default to an inappropriate treatment which may harm patient
- Reasons for non-adherence: (1) patients doesn't understand instructions as given, (2) patients have trouble following regimen b/c it's unpleasant, interferes w. routine behaviour, (3) patient has a negative attitude toward a physician. If patient is unhappy they'll ignore medical advice, (4) patients forget about the requirements

Communication

- Improving communication can help improve noncompliance to recommendations
- Improvements through: more courtesy, encouragement, reassurance and taking time to answer questions with decreased reliance on medical jargon

- Simplifying instructions, providing more rationale for instructions, reducing the complexity of treatment regimens, helping patients with emotional distress that undermines adherence, and training patients in the use of behavior modification strategies