PSY 1102 Development & Intelligence

Keywords, Questions	Notes
- Teratogens - Zygotic, Embryonic, Prenatal - Ectopic Pregnancy (embedding in fallopian tubes) - Period of the fetus (9th week of gestation) - Assimilation/accommodation - Equilibration/disequilibration - Sensorimotor period (0-2, gains new knowledge through tactile interaction) - Preoperational (2-7, gains new knowledge through	- Environmental factors that negatively affect proper development during pregnancy - Zygote period is two weeks from conception, ends with blastocyst embedding itself in the uterine wall - Uterine wall can expand and contract, fallopian tubes can't - Monozygotic is when the fertilized egg divides, dizygotic is when there's two eggs during ovulation - Development occurs cephalocaudally, body plan stats from head to tail, as well as proximodistal, from development of internal organs to extremities - Infants can already be familiar with their mother's voice as opposed to others - Infant behaviour can be a predictor for future behaviour - Teratogens have most effect on the embryonic stage, as during the zygotic stage cells aren't differentiated enough and the fetal stage they're mostly developed - About 10% of women worldwide consume alcohol during pregnancy - Sleeper effects are negative effects seen later in development - Piaget was a *constructivist* theorizing children were the center for constructing their individual knowledge of the world - Assimilation is when new information is integrated with the existing knowledge/theories (existing cognitive structures) - Accommodation is when a child creates a new cognitive structure to accommodate new knowledge that doesn't quite fit anywhere else - Equilibration in a child's mind exists when theories are coherent with each other. Disequilibration exists when there's knowledge/cognitive structures that don't quite fit in, and so every other theory or cognitive structure has to be shifted around to accommodate all knowledge

Summary

Physical development begins from the period of the zygote (0-2 weeks) when the blastocyst is growing in size. Embryonic development begins (2-9 weeks) when cells differentiate cephalocaudally (body plan from head to tail) and proximodistal (integral to extremities). Teratogens are environmental agents negatively affecting embryonic development when the fetus is in it's primary stages of development, commonly alcohol, cigarettes and other drugs. Zika virus causes microcephaly, stillbirth, and abnormal mental development. Sleeper effects can show up later in childhood. Piaget was a constructivist, believing individual children were the center of their own development, gaining new knowledge dialectically. Conflicting information is synthesized into cognitive structures eventually synthesizing into a coherent picture. New knowledge acquired through assimilation is for example an object has enough similar features with another category, and accommodates into new cognitive structures if they don't. This results in equilibration from disequilibration.

Keywords, Questions	Notes
- Sensorimotor period (0-2, gains new knowledge through tactile interaction) - Preoperational (2-7, gains new knowledge through intuition and can use symbolic imagery/manipulation) - Concrete preoperational (7-12, characterized thinking concretely, but not adept in abstract thinking)	- Birth to one month infants learn through basic reflexes - 1-4 months is primary circular reactions which are repetitive and simple like sucking their thumbs - 4-8 is secondary circular reactions with external objects - Infants lack object permanence, once out of sight they don't exist in the child's mind - 8-12 object permanence, have to combine secondary reactions to accomplish goals like pulling a cloth that a toy is on top of it to bring it closer - Tertiary circular reactions is experimenting with objects to gain knowledge about them and their properties - 18-24 is mental representation, essential to mimicry - Animism and egocentrism, they attribute theory of mind to inanimate objects like stuffed animals, and also have difficulty in attributing full theory of mind to other humans - Children experience difficulty in realizing objects are the same despite physical changes - At the concrete stage, children have difficulty in thinking about future events - Objects maintain their identity despite physical change (e.g broken excalibur is still excalibur) - Compensation, different shapes can have same volume - Inversion, physical changes can be reversed

Summary

Infants/toddlers primarily learn about the world through physical interaction, first with their own body, then external objects, through combining secondary circular reactions etc. Experimenting with objects and their interactions with the world is a mode of learning (tertiary circular reactions). Children learn more about the properties of objects like their identity, and how they can be manipulated and changed in different ways through conservation tasks.

Keywords, Questions	Notes
- Sociocultural theory - Zone of proximal development (the distance between how a child can accomplish a task on their own, and when they might need assistance) - Imprinting (species are genetically predisposed to look at adults as authority figures) - Securely attached (a healthy attachment to others, independent and emotionally close - Insecure resistant (need constant attachment to mother) - Insecure avoidant (minal distress when mother isn't present, comfortable with strangers) - Disorganized attachment (odd behaviours, not consistent) - Preconventional morality (in children, based morality and rewards and punishment) - Conventional morality (children base morality off of social norms) - Post-conventional morality (base morality off of abstract principle) - Formal occupational period (adolescence reason abstractly as well as concretely) - Adolescent egocentrism - Imaginary audiences and personal fables - Foreclosed identity (have already decided on who they are) - Identity diffusion (have't committed to any identity) - Psychosocial moratorium (are exploring themselves) - Identity achievement (have committed beliefs about their identity) -	- Vygotsky theorized parents and the child's community provide a kind of cognitive scaffolding to help them learn - Language is a kind of psychological tool which can't be learned individually. Same with calculators or abacuses - Children engage in egocentric speech, but is internalized over time - Infants react negatively if their mother is still faced and doesn't respond to them - Majority of infants are securely attached and comfortable playing with strangers in novel areas as long as the mother is present. Upset when mothers weren't present - Formal occupational period also marked by ability to think in terms of future events - Prefrontal cortex is developing the most during this stage, the part of the brain behind higher-order cognitive function - Pruning of dopaminergic synapses may explain why young adults are better able to reason first before gut reasoning - Adolescents believe they're still the center of social gravity, and look at their actions through the perspective of others - Into teenhood, individuals rely more and are more influenced by their peers than their parents - Parent-child relationships do however still have considerable effect, and are a determinant in mental health

Summary

Children learn from the immediate community, as they provide cognitive scaffolding which is a kind of constraint or direction for learning. Zone of proximal development is the learning distance between independent and dependent learning. Imprinting is genetic determinants of how an animal infant knows what is an authority figure. Securely attached when a child is fine as long as mother around, insecure resistant when they are clingy, insecure avoidant when they're mostly indifferent to mother present, disorganized when it is neither. Majority are securely attached, get upset when the mother isn't reacting to them.

Keywords, Questions	Notes
- Secure/autonomous, anxious/preoccupied, avoidant/dismissive - Longitudinal studies (studies over time) - Cross-sectional (comparative) - Novelty Preference (infants prefer looking at new as opposed to old things)	- Benchline working memory performance is achieved at 19, and processing at 15 - Some 15% of adults 60-85 (mostly skewed around 85) have some kind of dementia. 3/4 of the cases are Alzheimer's. - Novel experiences result in changes in the brain, neuroplasticity - Learning and taking on more experience results in building up of one's cognitive reserve - Social clock is cultural expectations of life events around age - Childrearing negatively affects relationships, and when there's no longer children in the picture marital satisfaction gets better - Young people emphasize information related goals, whereas older folks emphasize emotion related goals. Older people try to surround themselves with positive relationships - Older people have a harder time recovering from negative emotional stimuli, effects being increased blood pressure or cortisol levels - Longitudinal studies may help us to understand how earlier events impact individuals later in life - Cross-sectional studies can help us understand the differences between various age groups - Stimuli unprompted establish a baseline, when adding in a new stimuli in different scenarios one can compare how behaviours change. - Infants suckle more when listening to speech as opposed to nonspeech.

Summary

People have different relationship styles, much like infant relationships with mothers. These are analogues like having balance between being autonomous and security with a partner, or being clingy or independent from their significant other. Working memory is at adult level at 19, processing at 15. About 15% of adults aged 60-85 have dementia, 75% being Alzheimer's skewed around 85. Older people prefer having emotional security and having positive relationships, whereas younger people are more informational goal oriented. Novel experiences are important in combating dementia. This builds up one's cognitive reserve. Longitudinal studies are useful to understand development over time, whereas cross-sectional ca be useful for comparing behaviours of different age groups.

Keywords, Questions	Notes
- Self enhancement bias (rating yourself as average, or above your actual IQ) - Behavioural flexibility (the ability to solve context dependent and independent problems) - Direction (knowing what to do, and how to do it) - Adaptation (the ability to figure out new strategies for different situations and applying knowledge) - Criticism	- Some causes for lower intelligence might be fragile X, PKU, FAS, childhood trauma - Aristotle, practical and theoretical wisdom. Practical is the application of knowledge, and theoretical is the generalization of theories - A common point is the ability to learn and apply that new knowledge to new and novel contexts - Galton took physiological measures to determine intelligence. He took *g* to be how well one uses their senses - Some abilities formed a normal distribution - Psychologists use a central tendency to measure IQ, like a mean, media and mode. On a bell curve, all reflect the same value - Standard deviation is used to talk about variability, one one data point may deviate from the mean - Binet and Simon's tests were purposed to score attention, memory, imagination, reasoning, common sense, and abstraction. - Children in two year age intervals went through a battery of various tests, and were graded based on how many they completed. They were assigned a mental age based on averages around age - Terman divided groups by chronological age, and assigned them and intellectual quotient (IQ) (mental age/chronological age X 100) - IQ would max out at about 16, so a work around was to implement deviation IQ. Everyone was scored relative to the mean which is 100 - Weschler tests were indifferent to age groups, and could be tested on in different areas - Performance tasks like progressive matrices were implemented to make it culture free

Summary

Some genetic causes of lower intelligence, and is somewhat influenced by both genes and environment. Aristotle took intelligence to be both practical know-how knowledge as well as generalizable knowledge. The ability to learn and integrate knowledge generally is important. Galton measured physiological points in order to assess intelligence, which didn't work. Psychologists now measure IQ along a central tendency, or bell-curve, based around the same value produced by the mean, median, and mode. Standard deviation is used to talk about variability between individuals. Binet and Simon used more cognitive measures, and graded them according to age averages and assigned a mental age based on this. Terman divided the ages by groups, and gave them an IQ. This would eventually taper off towards 16, and would fall down. Weshler tests corrected this by using standard variation and was culture free.

Keywords, Questions	Notes
- Stereotype threat (the pressure to prove negative ethnic/cultural stereotypes wrong) - Active open-mindedness (actively being aware of biases and formal reasoning) - General cognitive ability, *g* - Primary mental abilities (word fluency, verbal comprehension, numeric abilities, spatial visualization, memory, perceptual speed, reasoning - Fluid general intelligence (ability to generalize thinking in novel situations) - Crystal general intelligence (using old knowledge to solve contextual problems) - Emotional intelligence (ability to perceive emotions accurately, the ability to use emotions for thought, the ability to understand and manage emotions) - Analytical intelligence (general cognitive abilities measured in IQ tests) - Creative intelligence (ability to operate in novel situations - Practical intelligence (the ability to use knowledge in the real world)	- Thirty American states and two Canadian provinces implemented a kind of eugenics program, some lasting until the 60s - The ethnicity of the IQ tester seemingly has an effect on the score of the participant, based on whether or not they're the same race/ethnicity as them - Beliefs about the innateness of intelligence can also affect the effort of the participant, and therefore the score - Mindfulness meditation can improve attention and memory, therefore affecting scores. It also seems to help retain cognitive resilience - Men are better at visuospatial tasks, whereas women are better at verbal activities - Men with lower math abilities more frequently dropout of school, skewing overall analyses - Spearman found that children's performances in certain subjects positively correlated with others - *G* can be used to predict academic performance, as well as how much one makes in their career - Wisdom paradox, people become wiser although they're not longer really able to take on novel situations and have more specific knowledge - Emotional/affective centers of our brain are also used for relevance - Monozygotic twins raised by separate families exhibit similar traits, but this is questioned as they often have the same socioeconomic status

Social Psychology

Keywords, Questions	Notes
- Confederates (actors participating in experiments) - Attribution theory (behaviour is the result of dispositional or situational causes) - Actor/observer bias (attribution of external causes to personal behaviour, internal to the other) - Self-serving bias (attribute positive behaviour and outcomes to internal causes, negative to external) - False consensus effect (believing more people share our beliefs than they really do) - Social scripts (learned behaviours that are expected in certain social situations) - Groupthink (dogmatic group thinking when conformity is most valued) - Diffusion of responsibility (as more people share burden, responsibility decreases) - Pluralistic ignorance (reliance of social cues to dictate behaviour, while others in the same situation are doing the same thing)	- The fire experiment demonstrates dangerous conformity, almost no participants takes action in evacuating - Individuals tend to attributed their behaviour to external causes, absconding themselves of agency or responsibility - We tend to attribute internal causes for other's behaviour - Self-serving bias also happens to co-operating groups - The impression formation process during the first impression determines how we think of other people - We look at people through a framework laden with confirmation bias based on our first impression assessment - About 75% of participants in the conformity experiment went along with the wrong answer at least once. Three other participants is the threshold for maximum compliance. - Conformity changes based on ambiguity of task, personality traits, and participants stress level - During Milgram's studies, 65% of participants went to maximum volts, which changed to 48% when moving to a warehouse. Experts believed that less than 1% would go all the way -