Module 4 Human Development

Developmental psychology: study of how behaviour changes over the lifespan.

Key challenges in studying developmental psych:

Post Hoc Fallacy	False assumption that because one event occurred before another it caused it
Bidirectional influences ⟷	Development is bidirectional; different elements affect one another (e.g. experience influences development and vice versa)
Cohort Effects	Effect observed in a sample of participants that results from individuals in the sample growing up at the same time
Influence of early experience	It can be overestimated, it is important to realise early experiences can be reversed and later experiences are equally important
Nature/ nurture debate	Many studies of human development can confound genes and environment. Nature and nurture intersect in the following ways: - Gene-environment interactions (effects of genes depend on the environment they are expressed) - Nature via nurture (individuals seek out environments that permit the expression of genetic predispositions) - Gene expression (activation/ deactivation in genes by environmental influences during development)

Cross-sectional design: research design that examine people of different ages at a single point in time.

Longitudinal design: examines development in the same group of people on multiple occasions over time.

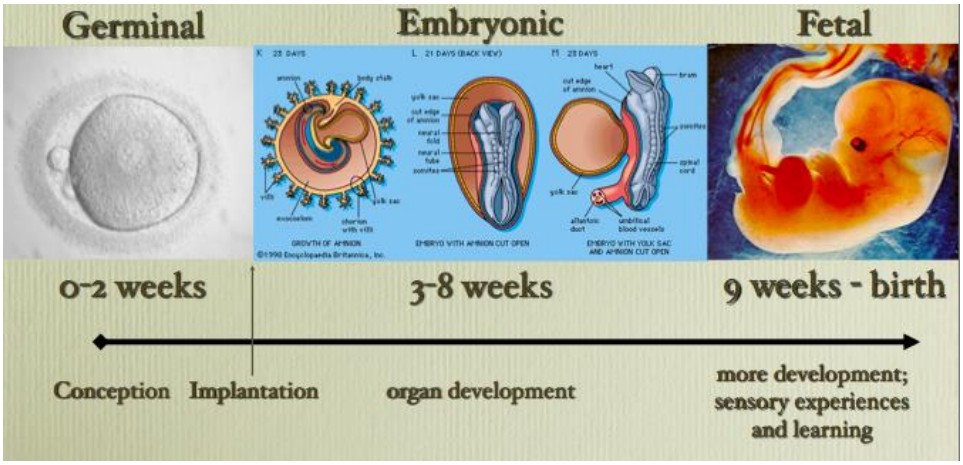
Attrition: subjects dropping out of a study before it is completed, major problem with longitudinal designs.

Physical and Motor Development

<u>Three stages of prenatal development</u>:

1. Germinal: Zygote (fertilized egg) begins to divide and double to form a blastocyst (ball of identical cells without specific functions.
2. Embryonic: once the cells start to take on functions the blastocyst becomes an embryo (2^{nd} to 8^{th} week of development, limbs, facial features and organs take form)

3. Foetal stage: embryo becomes a foetus around week 9 at this stage all major organs are established and physical maturation is the primary change.



Brain development: Begins development 18 days after fertilization and continues across lifespan, neurons develop rapidly, this is called proliferation. The brain also organises these into coordinated functions (they migrate to different areas of the brain).

Obstacles to normal foetal development:

- Hazardous environmental influences: teratogens (environmental factors that negatively affect prenatal development) can be varied (e.g. alcohol, x-rays, stress etc.)
- Genetic disorders: disorders or random errors in cell divisions can result in many irregularities e.g. down syndrome, body deformation etc.
- Premature birth: viability point (when the babies can survive alone) is 25 weeks, babies born premature can struggle as they are physiologically underdeveloped.

Infant Motor Development:

- Infant reflexes are automatic motor behaviours that infants are born with. E.g. sucking reflex and rooting (if you stroke their cheek they search for something to suck).
- Motor behaviours- bodily motion that occurs as result of self-initiated force that moves the bones and muscles. Major milestones are sitting, crawling, standing and walking.

Adolescence

- During adolescence the pituitary gland stimulates physical growth and the reproductive system releases sex hormones (estrogens and androgens) into the blood stream.
- Puberty is the achievement of sexual maturation resulting in the potential to reproduce.
- Changes include primary sex characteristics (those directly related to reproduction such as genitals) and secondary sex characteristics (that differentiate the sexes but don't relate directly to reproduction such as voice deepening.)
- The timing of puberty is genetically influenced.