Developmental psychologists research method:
What are the strengths and weaknesses of the psycho-physiological techniques used in the study of infants?
What are the various techniques used to study infants and what are their strengths or weaknesses?

Introduction:
There are many challenges when researching infants, they can’t read or talk, they constantly change their mood state, you can’t ask them to stay awake to finish the study and they get bored quickly. The study of development involves identifying change over time so researchers usually infer developmental changes by examining a group of infants with varying ages. Use many different methods to do this.

Methods/techniques:
Behavioural methods –
1. Observations, able to use on infants of all ages.
   Take place in natural environment (home, nursery)
   ☑ Ideal to see infants in real and everyday life
   ☑ Difficult to maintain naturalistic and spontaneous behaviour when a stranger is observing, however, it may be possible if the observations are completed on a regular basis so the infant gets used to the stranger
   ☑ Can only be an objective study if all variables are kept under control on every observation... difficult but possible
   ☑ Comparisons between individuals should be avoided or done with heavy caution as each infant has their own environment.
   Takes place in the laboratory environment
   ☑ Artificial, so only applications in real life environment can be inferred
   ☑ Very structured, all variable easily controlled = objectivity

2. High amplitude sucking techniques, only useful in new-borns and young infants
   Babies increase their rate of sucking on a dummy when they hear something novel and when they can discriminate between stimuli also when they hear their mother’s voice or native language.
   ☑ Very useful for investigating language abilities
   ☑ Not useful for all age groups

3. Preferential looking tasks, used on all ages of infants.
   Involves presenting two or more stimuli at once and measuring the amount of time the infant looks at each of them. The stimulus looked at for the longest is assumed to be the most interesting.
   ☑ Found that new-borns tend to look longer at familiar stimuli and 6 month olds tend to look longer at novel stimuli such as strangers = shows use on range of ages and an example of it in action
   ☑ Example is habituation techniques, infants are presented with a stimulus until they are bored of it, then shown the same stimulus alongside a novel one, if they look at novel stimulus more, = assume they have memory abilities and recognise the first stimulus as familiar.
   ☑ Used to investigate the development of joint or shared attention, can the infants follow a gaze? Measured with an eye tracking device.

4. Reports by family members or teachers, useful for all ages
   ☑ Based on many observations over time in a variety of situations
   ☑ Relying on memory of untrained family members, however, this can be overcome by giving parents a structured diary or ask them to only remember and recall recent events

5. Self-reports, only useful for children who are old enough to speak comprehensively
Stage 5, individual rights morality, follow laws to express the will of democratic majorities and further the values society holds.

Stage 6, morality of conscience, define right and wrong based on self-chosen ethical principles regardless of other groups.

=formal operations stage

Criticisms of Piaget and Kohlberg:
Biased towards western notions of justice and morality:
Kohlberg’s theory uses the moral foundations of harm/care and fairness/reciprocity. Other cultures may value these distinctions bit rank lower on the scale.

1. Haidt and Graham (2007) – found other important foundations in regards to morality; ingroup/loyalty, authority/respect and purity/sanctity... =might be more to the story and dependent on culture.

2. Shweder (1987) – asked American and Indian adults and children to rate the wrongness of 39 acts =childrens moral judgements were based on their culture e.g. Indian children rates getting a haircut the day after a death as more wrong than American children as they value respect after death more. Also, they rated a woman playing card whilst a man cooks dinner as more wrong. (More traditional moral obligations).

Human cognitive growth is not stage-like in reality:
Piaget assumes only children under 11 practice immanent justice then move to next stage but adults show such reasoning.

1. A governor in Japan blamed the tsunami on Japanese selfishness and claimed they could use it as a means of washing away there selfish greed. =drew a causal link between in-links that cannot be linked. Lerner (1980) – this is due to people needing to believe in a just fair world where people get what they deserve. It also allows us to commit to long-term goals with confidence... =IJ exists in adulthood and has useful function

2. Callan (2010) – adults may harbour intuitions of IJ but don’t openly express them as they wish to appear rational. When pps were put under high cognitive load they were more likely to express IJ in a particular situation.

3. Callan (2013) – visual world paradigm, tracked pps eye movement, when they were told a person was good they were more likely to anticipate a good outcome (measured by looking patterns at images). =adults bias towards a good outcome for good people.

4. Callan (2014) – those who are more religious hold increased IJ views as well as those who hold ‘magical thinking’. =IJ used in adults everyday beliefs =not a stage-like distinct life process.

Piaget and Kohlberg assessed techniques that underestimated children’s moral knowledge, as young children have been found to have much more moral reasoning than they can tell/show.

1. Hamlin (2007) – used a preference choice technique on infants that couldn’t speak yet... they showed a preference towards an image that was seen helping another rather than hindering... =entertain moral thoughts.

2. Shaw and Olson (2012) – 6-8 yr olds threw away resources that put them at an advantage to avoid inequality between them and other children. According to the two theories, children at this age they should not be using intent (Piaget) and not focusing on self-ego (Kohlberg).

Too focused on moral reasoning rather than emotions and intuition:
Piaget and Kohlberg claim that children reason then make moral decision and take no role in explaining intuition. (Look at consequences then makes judgement or reason what others would like before morally judging beh etc.)

1. Haidt (2001) – Social intuitionist model, claims that moral judgment is caused by quick moral intuitions and is then followed by ex-post facto moral reasoning (but only when needed).
all human faces (habituation). 5-7 months they can link emotional expressions and voices (Soken and Pick 1992). Langlois – prefer prettier faces, based on interaction with older women.

**Auditory development:**

Auditory localization – infants turn towards sounds and are more likely to respond when they last for a few seconds due to their slow movements.

Reach adult hearing levels between 5 – 8 years.

At 2 days old, a preference for mother voice and higher pitch sounds, due to exposure in prenatal life.

Sensitive to music – new-borns can discriminate musical sounds vs. general sounds, 2 months can discriminate between musical sounds and 6 months can distinguish melody. (Butterfield 1972, Jusczyk, 1977, Trehub, 1993).

**Tactile development:**

First sense to develop (Field. 2001) as it is activated before birth. Can feel pain and discriminate between types of touch based on temperature and pressure... e.g. positive reaction to stroking and negative to sudden changes.

Manual exploration takes over oral exploration at about 4 months due to greater sensorimotor control.

**Gustatory and olfaction development:**

Taste and smell function before birth and as new-borns elicit appropriate facial expressions dependant on the smell.

Can tell their mothers breast pad from others (McFarlane, 1975).

Innate or learnt? Learnt because the prenatal environment provides a range of smells which babies learn to like or avoid and thus influences their behavioural development in childhood, e.g. alcohol.

**Intermodal perception:**

Piaget – information from each sense is separate and only after months of development can they be integrated and form associations.

Gibson – differentiation account – integration occurs at early ages, and in fact they must differentiate between all the perceived modalities. Supported by Meltzoff and Borton – babies could visually pick a pacifier they sucked when visually impaired... can link the senses.

**Sensorimotor development:**

Controlling motor behaviour with regards to specific sensory info.

Neonatal reflexes – involuntary responses to external stimulation since birth... reflexes eventually replaced by motor behaviour at around 2 months, but later emerge as intentional and controlled reflexes. Reflexes caused by brain stem, then prevented by maturation of cerebral cortex which inhibits the reflex mechanism, but relearned by cortical structures e.g. allowing walking.