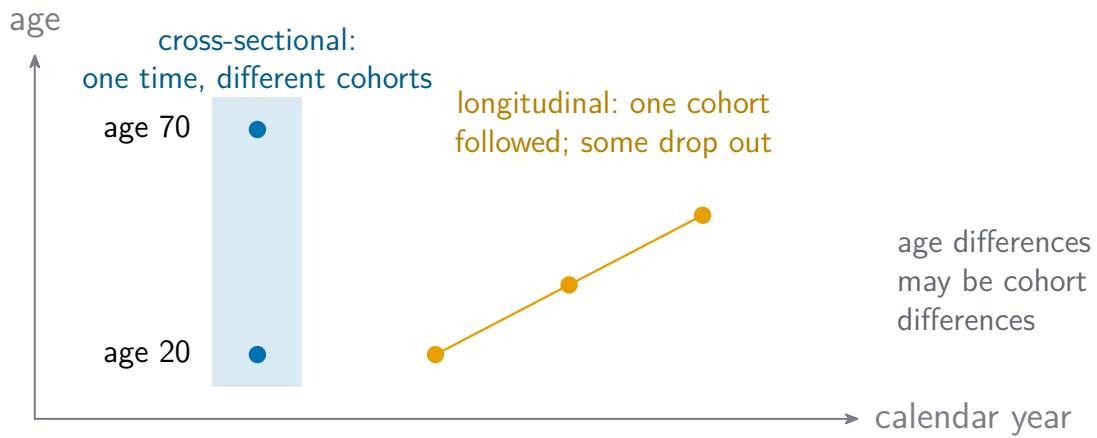
Exercise walk-through

4.1
Developmental psychology: evidence and transfer

GRE · GRE Subject Test · GRE Psychology

Figure: Research designs



- Cross-sectional risks cohort effects; longitudinal risks **attrition**.
- Read the axes and units first.

Nature and nurture

- Identical twins share all their genes, fraternal twins about half. If identical twins are more alike, genes contribute.
- Adopted children can be compared with biological and adoptive parents.
- **Heritability** is the share of variation in a trait within a population linked to genetic differences. It says nothing about an individual, and it can change when environments change.

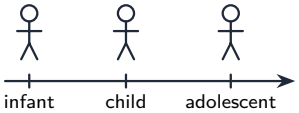
Worked example: computers and age

- This is cross-sectional, so age is confounded with cohort: the older group grew up without computers.
- A longitudinal study of one cohort would separate ageing from experience, but people who find the tests hard may drop out, making the remaining group look better.
- A sequential design follows several cohorts and compares them at the same ages.

Exercises 2.1·2.2

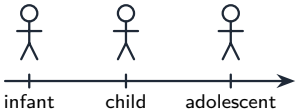
2.1 Following the same children for ten years is: [1]

A. longitudinal B. cross-sectional C. a single case only



2.2 Different childhood schooling across age groups is a possible: [1]

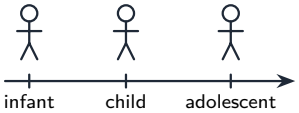
A. cohort effect B. placebo only C. randomisation guarantee



Exercises 2.1·2.2

2.1 Following the same children for ten years is: [1]

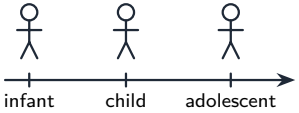
A. longitudinal B. cross-sectional C. a single case only



2.1 Answer: A. The same participants are measured across time. The other options do not satisfy the stated defining conditions.

2.2 Different childhood schooling across age groups is a possible: [1]

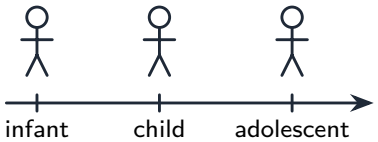
A. cohort effect B. placebo only C. randomisation guarantee



2.2 Answer: A. Historical exposure differs with generation. Compare the exact process, design or evidence, rather than an associated keyword.

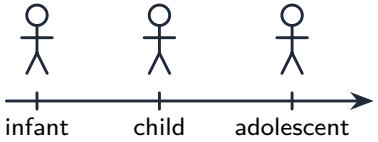
Exercise 2.3

2.3 Revisit the worked case. State one conclusion its evidence supports and one stronger conclusion it does not support. Explain the difference. [2]



Exercise 2.3

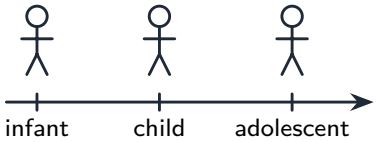
2.3 Revisit the worked case. State one conclusion its evidence supports and one stronger conclusion it does not support. Explain the difference. [2]



2.3 Use the worked case evidence to support a bounded claim and explain why a causal, universal or stronger claim needs additional evidence. The claim must fit the specific design and observed process.

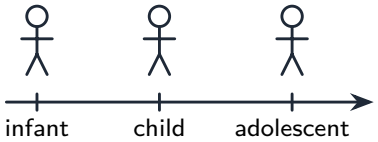
Exercise 3.1

3.1 A study compares adolescents and adults once, then calls the difference a developmental change. Give the design, a competing explanation and a complementary design with its limitation. Give the interpretation, supporting reasoning, a relevant alternative or limitation, and an appropriate check. [4]



Exercise 3.1

3.1 A study compares adolescents and adults once, then calls the difference a developmental change. Give the design, a competing explanation and a complementary design with its limitation. Give the interpretation, supporting reasoning, a relevant alternative or limitation, and an appropriate check. [4]



3.1 This is cross-sectional. Cohort, schooling or selection differences can accompany age. A longitudinal study follows the same participants and estimates within-person change, but selective attrition and practice effects remain. A sequential design can combine cohorts and repeated measurement; no label alone removes bias. Award B1 each (authored) for the interpretation, its reasoning, a relevant limitation/alternative and an appropriate check, up to four points. Accept a different justified answer satisfying these demands.