7.13 Reliability and Validity in Psychological Research: 30-minute Pack

AQA 7182 · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 A laboratory study measures children's recall of a short story immediately after hearing it and then again one year later, to test memory retention. Identify one threat to internal validity in this design and suggest one solution to reduce that threat.

(Total for Question 1 is 3 marks)

2 A researcher is worried that social desirability bias is reducing construct validity of a face-to-face interview measuring antisocial behaviour. Outline three procedural changes that could be made to reduce social desirability bias, and explain why each would help.

(Total for Question 2 is 6 marks)

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3 Explain how a double-blind procedure can improve internal validity in a drug trial, and give two practical drawbacks of implementing a double-blind design in psychological research.

(Total for Question 3 is 6 marks)

4 A field observation study tests whether morning commuters are more likely to show impatient behaviour on trains during a particular month. Discuss one reliability issue and one validity issue specific to field observations in this context, and suggest one method to improve each issue.

(Total for Question 4 is 6 marks)

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Mark scheme · 7.13 Reliability and Validity in Psychological Research: 30-minute Pack

Question 1

identifies a threat: internal validity may be affected because the test and retest are a year apart and developmental changes or historical events could alter memory performance oe	**M1**
suggests solution: use a shorter follow-up interval or include age-matched control groups tested at the same times to separate developmental effects from memory decay oe	**B1**
explains how solution helps: shorter interval reduces influence of maturation/history, while control groups allow separation of cohort effects from the memory effect being studied oe	**A1**

Answer: Threat: internal validity is threatened because developmental changes or life experiences over a year could change memory independently of the original encoding. Solution: use a shorter follow-up interval or include age-matched control groups tested at the same times; this reduces maturation and historical influences or allows them to be controlled for.

Question 2

suggests change one, e.g. use anonymous self-administered questionnaires rather than face-to-face interviews oe	**M1**
explains why this helps: anonymity reduces pressure to present oneself favourably, increasing honesty and construct validity oe	**A1**
suggests change two, e.g. use indirect questioning or the randomized response technique to make sensitive items less threatening oe	**M1**
explains why this helps: indirect techniques reduce the risk of biased answers by protecting respondents and making disclosure less risky, improving validity oe	**A1**
additional suggestion: use a self-completed computer-assisted method rather than an interviewer, or assure confidentiality in writing oe	**M1**
explains why this helps: computer methods and written confidentiality assurances reduce interviewer presence effects and social desirability concerns, increasing honest responding oe	**A1**

Answer: Change 1: use anonymous self-completed questionnaires rather than face-to-face interviews, because anonymity reduces the pressure to give socially desirable answers and increases construct validity. Change 2: use indirect methods such as randomized response or computer-assisted self-interviews so participants can answer sensitive questions without revealing personal admissions, which reduces bias and improves validity. Additional measures, such as written confidentiality assurances, also help by reducing fear of disclosure.

Question 3

explains how double-blind works: neither participants nor experimenters know which condition (drug or placebo) participants are in oe	**M1**
explains how this improves internal validity: it reduces demand characteristics and experimenter expectancy effects that could influence participants' behaviour or the measurement, so observed differences are more likely due to the drug itself oe	**A1**
identifies a practical drawback, e.g. increased logistical complexity and cost, or difficulty when side effects make blinding impossible oe	**M1**
explains why this is a drawback: complexity and cost can limit feasibility, and if side effects unblind participants or researchers the intended control is lost, reducing the benefit oe	**A1**
gives a second drawback or limitation, e.g. ethical concerns about withholding information or practical issues with emergency unblinding procedures oe	**M1**
explains effect: such ethical or safety procedures may require revealing condition allocation, which can compromise blinding and internal validity oe	**A1**

Answer: A double-blind procedure means neither participants nor researchers know who receives the drug or placebo. This reduces experimenter expectancy and demand characteristics, so differences are more likely to reflect the drug effect, improving internal validity. Drawbacks include greater logistical complexity and cost, and the possibility that side effects or safety procedures can unblind the study, reducing feasibility and potentially negating the benefits.

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Question 4

identifies a reliability issue: observer inconsistency or low inter-observer reliability in coding impatient behaviours across observers or days oe	**M1**
explains why this matters: inconsistent coding reduces the trustworthiness of comparisons across times and sites oe	**A1**
suggests improvement for reliability: use clear operational definitions, train observers and conduct inter-observer agreement checks or pilot coding sessions oe	**M1**
explains how this helps: training and agreement checks increase consistency and make findings more reliable oe	**A1**
identifies a validity issue: observers may misinterpret behaviours or context, so ecological validity may be high but construct validity of 'impatience' may be poor oe	**M1**
suggests improvement for validity: combine observations with brief anonymous passenger surveys or behavioural coding of validated indicators, and triangulate data to ensure the measure captures the intended construct oe	**A1**

Answer: Reliability issue: observers may code impatient behaviours inconsistently. Improvement: provide clear operational definitions, train observers and perform inter-observer agreement checks to raise reliability. Validity issue: observed acts may not accurately reflect 'impatience' as a construct. Improvement: triangulate with brief anonymous passenger self-reports or use validated behavioural indicators so the measure better captures the intended construct.

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