7.12 Sampling Methods and Ethical Issues in Psychological Research

AQA 7182 · about 60 minutes · Write-in edition

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Define random sampling as a method used to recruit participants for a psychology study in a community survey context.

(Total for Question 1 is 2 marks)

2 Define stratified sampling as it would be used to ensure gender and age representation in a school-based psychology study.

(Total for Question 2 is 2 marks)

3 Define systematic sampling in the context of selecting households for a local survey into daily screen time.

(Total for Question 3 is 2 marks)

4 Define opportunity sampling as used when a researcher selects participants from shoppers at a town centre on a single day.

(Total for Question 4 is 2 marks)

5 Define volunteer (self-selected) sampling in the context of recruiting participants via an online advert for a sleep study.

(Total for Question 5 is 2 marks)

6 A market research psychologist selects participants so that 48% are male and 52% are female to match the local adult population before testing shopping behaviour. Identify the sampling method used and outline one strength of this approach for representativeness in the consumer behaviour study.

(Total for Question 6 is 4 marks)

7 A researcher stands outside a supermarket and asks the first shoppers they meet to complete a quick wellbeing questionnaire. State one likely sampling bias in this opportunistic recruitment and explain its likely effect on the study's results.

(Total for Question 7 is 3 marks)

8 Outline one strength of using random sampling when recruiting participants for a neighbourhood attitudes survey.

(Total for Question 8 is 3 marks)

9 Explain one limitation of volunteer sampling for an online study into smartphone addiction.

(Total for Question 9 is 3 marks)

10 A researcher selects every 7th name from a hospital outpatient appointment list to invite to a stress questionnaire. Identify the sampling method used in this healthcare study.

(Total for Question 10 is 2 marks)

11 Explain how a researcher can use presumptive consent and debriefing to handle the ethical issue of deception in a short laboratory attention study involving mild deception about the study aim.

(Total for Question 11 is 6 marks)

12 Discuss ethical issues in psychological research. Refer to the hypothetical study below in your answer.

Hypothetical study stimulus: A researcher plans to investigate whether listening to sad music for 20 minutes affects short-term mood in adults. Participants will be recruited via an online advert and will be told that the study is about 'music and attention' to avoid demand characteristics. After the listening task participants complete a mood questionnaire. Some participants may find the music upsetting. The researcher plans to debrief participants afterwards and will allow participants to withdraw their data at the debriefing stage.

(Total for Question 12 is 12 marks)

13 A university study advertises on social media and accepts anyone who volunteers to take part in a memory experiment. Identify the sampling method and identify one ethical issue this raises for the researcher to address in the online recruitment process.

(Total for Question 13 is 4 marks)

Mark scheme · 7.12 Sampling Methods and Ethical Issues in Psychological Research

Question 1

selecting participants so that every member of the target population has an equal chance of being chosen, oe — **B1**

often done using a random method such as a random number generator or drawing names from a hat, oe — **B1**

Answer: Selecting participants so every member of the target population has an equal chance of selection, for example by using a random number generator on a full list of the population.

Question 2

dividing the target population into subgroups or strata based on a characteristic such as gender or age, oe — **B1**

then selecting participants from each stratum in proportion to their presence in the population oe — **B1**

Answer: Dividing the population into strata such as gender or age, then selecting participants from each stratum in proportion to their numbers so the sample mirrors the population on those characteristics.

Question 3

selecting every nth member from an ordered list or sequence, after a random start oe — **B1**

for example choosing every 10th household from a street list oe — **B1**

Answer: Selecting every nth person or household from an ordered list after a random starting point, for example every 10th household on a council list.

Question 4

selecting participants who are readily available to the researcher at the time and place of the study oe — **B1**

also called convenience sampling, for example recruiting whoever is walking past in a shopping area oe — **B1**

Answer: Selecting participants who are convenient and available to the researcher at the time, for example approaching shoppers in a town centre who agree to take part.

Question 5

participants opt in voluntarily after responding to an advert or invitation oe — **B1**

this often attracts those who are especially interested or motivated, for example people who reply to an online sleep study advert oe — **B1**

Answer: Recruiting people who choose to take part after seeing an advert or invitation, for example participants who respond to an online call for volunteers for a sleep study.

Question 6

identifies stratified sampling cao — **B1**

outlines a strength: ensures sample mirrors key population characteristics so it is more representative oe — **M1**

explains why this matters, e.g. reduces sampling bias in estimates of consumer preferences across genders oe — **A1**

gives an example or consequence, e.g. more confidence that findings apply to the local adult population rather than an unbalanced sample oe — **A1**

Answer: Method: stratified sampling. Strength: by matching the sample proportions to the population it improves representativeness and reduces sampling bias, so estimates of shopping behaviour are more likely to reflect the local adult population rather than being skewed by overrepresentation of one gender.

Question 7

identifies a likely bias, e.g. selection bias or volunteer bias relating to time of day and shopper type oe — **M1**

explains the effect: the sample may overrepresent certain demographic groups such as retirees or people shopping at that time, so results may not be generalisable to the wider population oe — **A1**

may note that this could affect estimates of average wellbeing or mask effects present in underrepresented groups oe — **A1**

Answer: Bias: selection bias due to opportunistic sampling linked to time and location. Effect: the sample may overrepresent certain groups, for example older people who shop during quieter hours, so wellbeing estimates may not generalise and could either overestimate or underestimate true population wellbeing.

Question 8

identifies a strength: reduces sampling bias and increases representativeness oe — **M1**

explains why this matters: a representative sample improves generalisability of the findings to the target population oe — **A1**

gives an example or consequence, e.g. avoids overrepresenting one neighbourhood group which would skew results oe — **A1**

Answer: Random sampling reduces sampling bias and tends to produce a more representative sample, which improves the generalisability of the survey findings; for example it prevents one demographic group from being overrepresented and skewing results.

Question 9

identifies limitation: volunteer samples are prone to self-selection bias oe — **M1**

explains consequence: the sample may overrepresent people with strong interest or concern about smartphone use, so results may not generalise to the wider population oe — **A1**

could mention effect on validity or that estimates of prevalence may be biased oe — **A1**

Answer: Volunteer sampling is prone to self-selection bias because people who respond to an online advert may be unusually interested or concerned about smartphone use, so findings may overestimate levels of problematic use and not generalise to the whole population.

Question 10

systematic sampling cao — **B1**

selecting every nth name from an ordered list is the defining feature oe — **B1**

Answer: Systematic sampling, because the researcher selects every 7th name from an ordered list.

Question 11

defines presumptive consent or describes its use, e.g. asking a separate sample whether they would agree to the deception beforehand oe — **M1**

explains how presumptive consent helps reduce ethical concern, e.g. it indicates whether people like those being tested would find the deception acceptable, so risks are anticipated and reduced oe — **A1**

states what a debrief involves, e.g. fully explaining the true aim and reasons for deception after participation and checking participant wellbeing oe — **M1**

explains how debriefing addresses harm, e.g. it restores informed consent post hoc, corrects any misconceptions and offers support or withdrawal of data if participants object oe — **A1**

identifies an additional safeguard such as offering the right to withdraw data after debrief or providing contact details for counselling oe — **M1**

explains why this matters, e.g. it gives participants control and helps meet BPS ethical requirements for respect and protection from harm oe — **A1**

Answer: Presumptive consent can be obtained by asking a similar but separate group whether they would agree to the mild deception, helping the researcher judge acceptability and reduce risk. After the study the researcher debriefs participants by fully explaining the true aim and the reason for the deception, checking wellbeing, and offering the right to withdraw their data or signpost support. These procedures restore informed consent post hoc, reduce harm, and align with BPS principles of respect and protection.

Question 12

Level 4 Detailed, accurate knowledge of ethical principles and relevant BPS guidance is shown. The answer applies these principles effectively to the stimulus and evaluates the proposed procedures thoroughly. Strengths and limitations of the researcher's approach are discussed with clear justification and alternative solutions are offered. The response is well organised and uses appropriate psychological terminology. — **10-12**

Level 3 Good knowledge of ethical principles is evident with mostly accurate application to the stimulus. Evaluation is present and shows awareness of strengths and weaknesses in the researcher plan. Some relevant suggestions for improvement may be offered. The answer is mostly clear and structured. — **7-9**

Level 2 Basic knowledge of ethical issues is shown and some attempt is made to apply them to the scenario. Evaluation is limited or descriptive rather than analytical. Some valid but underdeveloped points are made about how to handle the issues. — **4-6**

Level 1 Very limited knowledge or understanding of ethical issues. Application to the stimulus is minimal or absent. The answer is brief and lacks structure. — **1-3**

Level 0 No creditworthy material. — **0**

Indicative content:

- AO1: Key ethical principles include informed consent, protection from harm, confidentiality, the right to withdraw, and avoidance or justification of deception. BPS Code requires that deception is only used if no alternative exists and that participants are debriefed promptly.
- AO1: Informed consent should be obtained in advance where possible and must include sufficient information about procedures, foreseeable risks and the right to withdraw. For online recruitment this may include an information sheet and tick-box consent before participation.
- AO3: Application to stimulus, informed consent is compromised by the cover story 'music and attention'. The researcher should justify the deception and use measures such as presumptive consent, careful information that omits only the minimal necessary details, and full debriefing afterwards.
- AO3: Protection from harm is a central concern because some participants may become upset by sad music. The researcher should conduct a risk assessment, screen out vulnerable participants, provide warnings in the advert, allow participants to stop the task at any time, and provide support contacts in the debrief.
- AO3: Right to withdraw is partly addressed because participants can withdraw data at debrief, but best practice is to allow withdrawal during the study and to make the right to withdraw explicit in pre-study information and consent materials.
- AO3: Confidentiality must be maintained for online data. The researcher should explain how data are stored, who can access them, and how anonymity will be protected. If support referrals are offered, this may require limited breaking of anonymity with participant consent.
- AO3: Debriefing must fully explain the deception, rationale and findings, check participant wellbeing and offer the opportunity to withdraw data. Debriefing also offers an ethical benefit, educational value and can restore trust.
- AO3: Evaluate trade offs: deception may be necessary to avoid demand characteristics, but it increases ethical burden. Measures such as presumptive consent, clear pre-warnings, voluntary stopping, and thorough debrief mitigate risks but may not eliminate them. The researcher must weigh scientific gain against potential harm.
- AO3: Suggestions for improvement include pilot testing the procedure for harm, including screening questions to exclude those with recent bereavement or clinical depression, providing immediate online wellbeing resources, offering follow-up contact if needed, and seeking ethics committee approval.

Question 13

identifies the sampling method as volunteer (self-selected) sampling cao	**B1**
identifies an ethical issue: ensuring informed consent online, or verifying participant age, or protecting confidentiality oe	**B1**
explains how the issue arises in this context, e.g. online adverts may not provide full information or may attract underage participants, so consent may not be properly informed oe	**M1**
suggests a researcher action to address it, e.g. provide full information on the advert and a detailed online consent form with age verification, or allow contact with the researcher for questions oe	**A1**

Answer: Sampling method: volunteer sampling. Ethical issue: ensuring informed consent online, because adverts may not give full information and underage people could respond. The researcher should provide clear study information, an online consent form including age verification, and an opportunity to ask questions before participation.