

Cambridge AS & A Level · Psychology 9990 · Notes

Sampling of participants AS

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What you need to know

Sampling questions come up on almost every Paper 2: short questions about how the core studies found their participants, and questions about new studies you have never seen. By the end of this topic you should be able to:

1. **Population and sample.** Say what a **target population** is and what a **sample** is, and pick each out in a study.
2. **Three sampling techniques.** Describe **opportunity sampling**, **random sampling** and **volunteer (self-selecting) sampling**, with examples, including the technique used in each core study where it is known.
3. **Evaluate** each technique (its strengths and weaknesses), and judge a particular sample: how well it represents the population (its size, who is in it, who left), and so how far the results can be **generalised**.
4. **Apply** all of this to a new study: choose a suitable technique, describe exactly how the researcher would use it, and explain the problems it could cause in that study.

Random **allocation** (deciding which condition each person goes into) is part of the aims, hypotheses and variables topic, but questions often mix it up with random sampling, so the difference is explained here too.

Understand it

Population and sample

Psychologists want findings that apply to a large group of people: all teenagers, all shoppers, all people with a phobia. That whole group, the people who share the characteristic the study is about, is the **target population**. It is almost never possible to test everyone in it, so the researcher studies a smaller group taken from it: the **sample**. The sample is the people (or animals) who actually take part.

- A study of how exam stress affects sleep in Year 11 students in one city: the target population is all Year 11 students in that city; the sample might be 60 of them.
- In Piliavin et al., the population was New York subway passengers; the sample was the passengers in the carriages where the trials took place, about 4450 passengers.

A population is defined by a **shared characteristic**, not just by a place: "people who travel on the subway", "readers of a local newspaper", "15-year-olds at one school". Naming a place alone ("people from Israel") is an example, not a definition.

Why the sample matters: representativeness and generalisation

The researcher studies the sample but wants to draw conclusions about the population. That is only safe if the sample is **representative**: it has the same mix of people as the population (ages, sexes, backgrounds, abilities and so on). If it does, the results can be **generalised**, that is, applied to the whole population.

A sample that over-represents some kinds of people and leaves others out is **biased**. Results from a biased sample may only be true for the kind of people in it.

What makes a sample less representative:

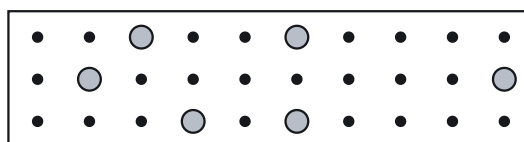
- **Who is in it.** All one sex, one age group, one school, one culture, or people who are similar to each other because of how they were found.
- **Its size.** A **larger** sample is likely to contain more variety, so it is more likely to include the different kinds of people in the population, and one unusual person has less effect on the results. A very small sample (one parrot, nine sleepers) may be unusual in ways nobody can check.
- **Where it came from.** People from **more than one place** (several schools, several towns) are less likely to share one place's quirks, such as one school's teaching or behaviour rules, so the results are more generalisable.
- **Who left.** See attrition below.

The three sampling techniques

Each box is a target population of 30 people. Shaded circles are the sample of 6.

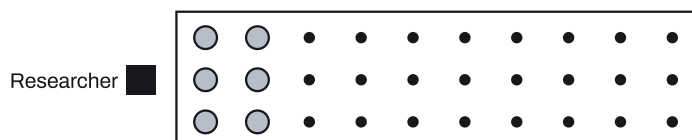
Random sampling

Everyone is numbered 1 to 30; six numbers are drawn by chance: 3, 6, 12, 20, 24, 26.



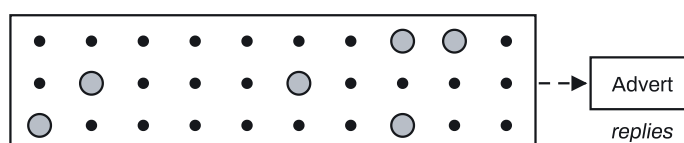
Opportunity sampling

The researcher uses whoever is nearby and available at the time.



Volunteer (self-selecting) sampling

People choose to reply to an advert; everyone who replies is used.



Opportunity sampling means using whoever is available at the time and willing to take part: the researcher approaches people who happen to be nearby (passers-by in a shopping centre, students in the researcher's own class, people already in the place being studied).

- **Strength:** quick, easy and cheap, because the participants are already there; this also makes a larger sample easier to collect.
- **Weakness:** it is unlikely to be representative. People who are in the same place at the same time tend to be similar (a weekday morning in a library finds few people with full-time jobs), and the **researcher chooses** whom to approach, so they may pick people who look friendly or helpful, which biases the sample.

Random sampling means every member of the target population has an equal chance of being chosen. To do it:

1. Get a **list of every member** of the target population, and only the people who fit the study (a school register filtered to one age group, a club's membership list).
2. **Number** everyone on the list.
3. Choose numbers by chance: put the numbers in a hat and draw them out, or use a random number generator (or a table of random numbers), until you have the number you need.

With a random sample of 40 from a year group of 320, each student has the same 1 in 8 chance of being picked: $\frac{40}{320} = \frac{1}{8}$. The researcher's preferences play no part.

- **Strength:** the researcher can't bias who is chosen, and with a large enough sample every kind of person in the population is likely to appear, so the sample is more likely to be representative and the results more generalisable.
- **Weaknesses:** you need a full list of the population, which often doesn't exist or can't be obtained; it takes longer; the people chosen may **refuse**, and those who agree may share something (more free time, more interest in the topic), which brings bias back; and the result is only as wide as the list (a random sample from one school represents that school, not all schools).

"Choosing random people in the street" is **not** random sampling: the people in that street had a chance and nobody else did, and the researcher still decides whom to stop. That is opportunity sampling.

Volunteer (self-selecting) sampling means the participants choose themselves: the researcher **advertises** the study (a poster, a newspaper or online advert, an email to a list, a notice in a workplace) and the people who **reply** to it, by contacting the researcher or signing up, become the sample.

- **Strengths:** the advert can reach many people, in many places, which a researcher standing in one spot can't; and the participants have chosen to take part, so they are willing, likely to engage with the task and less likely to drop out.
- **Weakness:** people who volunteer are often a particular kind of person, for example more confident, more curious, with more free time, or especially interested in the topic (and perhaps attracted by payment). So the sample is biased towards "volunteer types", and it also only includes people who saw the advert.

Volunteering does **not** make a study ethical on its own. Participants still need full information, the right to withdraw and protection from harm. And payment or a reward can be used with any technique, so it is not what defines a volunteer sample.

Attrition: participants who leave

Attrition is the loss of participants during a study: people withdraw, don't come back for a later session, or can't be found. It matters in two ways:

- the sample gets **smaller**, so there is less variety and individual differences have more effect;
- the people who leave are often different from those who stay (more anxious, less motivated, more unwell), so the sample left at the end is **biased** and the results may not apply to the kind of people who left. That lowers validity.

In a longitudinal study (the same people retested over months or years) attrition is the biggest sampling problem. People may have moved house or school, changed phone number or email address, become ill or died, or no longer want to take part. The researcher has to choose how often to retest: often enough to catch the change being studied (once a year for something that develops slowly, such as attention through the teenage years), but not so often that people get fed up and drop out.

Random sampling is not random allocation

- **Random sampling** decides **who is in the study**: which members of the population become participants.
- **Random allocation** decides **which condition** each participant goes into, once they are in the study (a coin toss, names drawn from a hat, odd numbers to one group). Every participant has an equal chance of being in either condition, so participant variables (ability, mood, experience) are spread evenly by chance and are unlikely to differ between the groups.

A study can use random allocation with an opportunity sample, or random sampling with no allocation at all (a correlation).

Sampling in the core studies

You need each core study's sample size and make-up, and its sampling technique when it is known.

Core study	Sample	Technique
Dement and Kleitman	9 adults, 7 men and 2 women; 5 studied intensively	Opportunity (examiners also accept snowball): some were sleep researchers and their families. Not volunteer
Milgram	40 men aged 20 to 50 from the New Haven area, with a range of jobs (for example postal clerks, high school teachers, salesmen, engineers and labourers), paid for taking part	Volunteer : they replied to a newspaper advert or to letters sent by direct mail asking for people for a study of memory and learning

Core study	Sample	Technique
Piliavin et al.	about 4450 passengers on New York subway trains, men and women	Opportunity: whoever was riding in the carriage
Baron-Cohen et al.	Group 1: 15 men with AS/HFA; Group 2: adults from evening classes in Exeter and library users in Cambridge; Group 4, 14 adults matched on IQ to Group 1	Group 1 volunteer (replied to adverts in an autism society magazine); Group 2 opportunity ; Group 4 random
Saavedra and Silverman	one 9-year-old boy with a button phobia, and his mother	Opportunity: they were already attending a university clinic for treatment
Hassett et al.	34 rhesus monkeys analysed (23 females, 11 males) from one troop at a research centre	Opportunity: the monkeys already living there
Hölzel et al.	16 right-handed adults (6 men, 10 women) on stress-reduction courses; 2 more men withdrew because the MRI scan was uncomfortable	Not stated in the study, so don't use it as an example of a technique
Bandura et al.	72 children (36 boys, 36 girls) from Stanford University's nursery	Not stated

Perry et al. and Pozzulo et al. don't state their techniques either. In a "using any examples" question, examples from these studies earn nothing, so use the studies in the table that have a technique, or make up your own example.

Key facts and formulas

There is no formula list in the 9990 exam. "Learn it" means you must remember it.

Fact	Status
Target population: the whole group of people who share the characteristic a study is about, that the results should apply to	Learn it
Sample: the people (or animals) from the population who actually take part in the study	Learn it
Opportunity sampling: using whoever is available and willing at the time, for example people nearby	Learn it
Random sampling: every member of the target population has an equal chance of being chosen (numbered list, then a hat or random number generator)	Learn it
In a random sample, each member's chance of being chosen = $\frac{\text{sample size}}{\text{population size}}$	Learn it

Fact	Status
Volunteer (self-selecting) sampling: people reply to an advert or request and choose themselves to take part	Learn it
Representative: the sample has the same mix of people as the population. Generalisable: the results can be applied to the population	Learn it
Larger and more varied samples (from more than one place) are more likely to be representative	Learn it
Attrition: losing participants during a study, which shrinks the sample and may bias it	Learn it
Random allocation (which condition each participant goes into) is not random sampling (who is in the study)	Learn it

How to do it

We have tagged 69 questions on this topic, all from Paper 2, from 2021 to March 2026. 13 of them have parts of more than one type (one has three), so the counts add up to 83. 31 of them are design questions that tell you **not** to write about sampling (type 9).

Question type	Questions
Strength or weakness of a sampling technique	11
Evaluate a particular sample	10
Define or describe a sampling technique	9
Describe how to recruit a sample	9
Identify the technique or sample in a named study	6
Random allocation (not a sampling technique)	3
Define or identify population and sample	2
Decide who to include in a planned study	2
Design question that says not to describe sampling	31

1. Strength or weakness of a sampling technique (11 questions)

Usually 2 marks: one for the point, one for explaining it or tying it to the study.

- Name the point:** quick and easy; the researcher can't bias who is chosen; more (or less) representative; biased; hard to get a list; people refuse; volunteer types.
- Explain it:** say why ("because the participants are already nearby", "because people in the same place at the same time tend to be alike").

3. **Link it** to the study when it names one: who in this population would be missed or over-represented, and how that would change the results.

Variations you will meet:

- **"One advantage of random sampling instead of opportunity (or volunteer) sampling"**: the researcher can't choose whom to approach, so the sample is more likely to include the range of people in the population, making it more representative and the results more generalisable. Don't just describe random sampling: compare.
- **"Why opportunity sampling may not be representative"**: people available at the same time and place are likely to be similar, and the researcher may pick people who seem willing.
- **Volunteer compared with opportunity**: volunteers can be reached in many places and are willing (advantage); they may share a "volunteering personality" and only people who saw the advert can reply (disadvantage).
- **"Why a core study may not have used volunteer sampling"**: say it would bias the sample, then link it to the study. For Bandura et al., parents of a child who is often aggressive might be embarrassed to put their child forward, and parents of a gentle child might worry the study would teach their child to hit, so either group could be missing, and the sample would not show the range of children's aggression.
- **A weakness of random sampling**: the people chosen may refuse, and if those who refuse are similar the sample is biased; or the list only covers part of the population (one school), so the sample can't represent the rest. "Time-consuming" only earns credit with a reason (every member has to be listed and numbered, and the chosen people found).

2. Evaluate a particular sample (10 questions)

Most are about a core study's sample; some are about a new study.

1. **Pick a feature** of this sample: small; all or mostly one sex; one age group; one place (one nursery, one school, one troop); all right-handed; some participants were researchers; people withdrew.
2. **Say what follows**, for this study: the results may not apply to the group that is missing (women, children, left-handed people, people from other backgrounds), or the feature could have changed the results (researchers who knew the aim, so their reports may have been shaped by what they expected (demand characteristics)).
3. For **two** weaknesses, make them genuinely **different** points (size, make-up, how they were found). Two points that both just say "low generalisability" count as one.

For example, Dement and Kleitman's sample: (1) only 9 people, who were probably alike, so the findings may not generalise; (2) too few women, so the results may only apply to men; (3) some were sleep researchers and their families, who knew what the study was about.

Variations you will meet:

- **Why both sexes were needed in both groups** (in a study comparing two groups, such as children and adults): males and females might respond differently on the DV, so if one group had more of one sex, a difference between the groups could be caused by sex, not by the variable being studied; with both in both,

the results also apply to both.

- **How withdrawals reduce validity:** a smaller sample, and the people who leave are often different from those who stay. In Hölzel et al., the two who withdrew found the scanner uncomfortable, so they may have been more anxious, and both were men, which left the group with even fewer men.
- **Why a larger sample is better:** more variety of people, so more representative and more generalisable.
- **Why recruit from more than one place:** more representative, plus a link to what is measured (one school may be unusually good or bad at what the study measures).
- **A longitudinal sample:** how often to retest, with a reason, and the problems in finding the same people again (see "Attrition" in Understand it).
- **A small sample of animals:** a practical weakness (they may not be typical of the species, and one unusual animal changes the results) and an ethical strength (fewer animals are put through the procedure).

3. Define or describe a sampling technique (9 questions)

Short questions (1–2 marks): "Outline what is meant by random sampling" or "...opportunity sampling, using X's study as an example."

1. Give the definition **without repeating the word**: "volunteer sampling is when people volunteer" earns nothing. Say what happens: "people reply to an advert and choose themselves".
2. For 2 marks, add a detail of how it is done, or the example from the stem (naming the researcher and where the people come from is enough: "she could ask people in the park she is studying").

6 marks: "Describe [two techniques], using any example(s)."

1. For **each** technique, up to 2 marks for points: the definition, then how it is done.
2. For **each** technique, up to 2 marks for examples: a core study that used it, or your own study.
3. Both techniques must be covered and at least one example given, or the most you can get is 4. There are no marks for evaluation, so don't spend time on strengths and weaknesses.

Model points:

- **Opportunity sampling** means using whoever is available at the time (1). The researcher approaches people who happen to be nearby, such as passers-by or students in their own class (1). Example: Piliavin et al. used the passengers who happened to be in the subway carriage (1); Baron-Cohen et al.'s Group 2 came from evening classes and a public library; Saavedra and Silverman's participant was already attending a clinic (1).
- **Random sampling** means every member of the target population has an equal chance of being chosen (1). Each member on a list of the population is given a number, and the numbers are drawn from a hat or picked by a random number generator until the sample is the right size (1). Example: to sample a school, take the list of all its students and draw 30 numbers (1); Baron-Cohen et al.'s Group 4 was chosen at random (1).

- **Volunteer sampling** means people choose to take part by replying to a request (1), such as a poster, a newspaper advert or an email, and those who reply are used (1). Example: Milgram's participants replied to a newspaper advert and to letters sent by direct mail (1); Baron-Cohen et al.'s Group 1 replied to adverts in an autism society magazine (1).

4. Describe how to recruit a sample (9 questions)

Up to 3 marks: what the technique does, how, and a link to this study's population.

Volunteer (the most common):

1. **How people find out:** a poster, flyer, newspaper or online advert, or an email.
2. **Where, for this population:** on the noticeboard of the club, in the staff canteen, to everyone's work email, on a parents' website.
3. **How they become participants:** the advert gives contact details, and **everyone who replies** (or signs up) is used. Leaving this out is the most common reason for losing a mark.

Asking people face to face after a class or in the street is **opportunity** sampling, not volunteer: the researcher is choosing whom to approach.

Random:

1. A list of **only** the target population (all the 15-year-olds on a school register, not the whole school).
2. Number them; draw numbers from a hat or use a random number generator until you have the sample size.

Opportunity: where the researcher will be and who they will ask ("people waiting at the bus station on a Saturday morning, asked as they arrive").

Variations you will meet: recruiting volunteers from two different groups (put adverts where each group will see them: a youth club and a retirement club); widening a volunteer sample (advertise in different newspapers or websites, in other towns, or ask for a range of people in the advert).

5. Identify the technique or sample in a named study (6 questions)

1. **Name the technique** (1 mark, one word is enough): opportunity, random or volunteer. "They replied to an advert" is not the name.
2. **Explain or outline how** (1–2 marks), with a detail from the study: "opportunity, because the passengers were on the bus anyway"; Milgram: a newspaper advert and direct mail, for men aged 20 to 50 from New Haven, paid for taking part.
3. "Features" of a sample can include its size and technique; "characteristics" means things about the people (sex, age, background). Don't repeat a feature the question gives you.
4. Sample features can be asked for directly (Milgram: two occupations).

6. Random allocation (not a sampling technique) (3 questions)

1. **Define it:** each participant has an equal chance of being put into each condition, decided by chance (coin toss, names in a hat).
2. **Use the study:** say what the conditions were and that chance decided who went where.
3. **Strength:** participant variables are spread evenly between the groups by chance, so a difference in the DV is more likely to be caused by the IV; and the researcher can't put the most able people in one group.

A random **order** (of questions or trials) is different again: it stops participants learning a pattern and stops the order affecting the results.

7. Define or identify population and sample (2 questions)

- **Population:** the whole group of people who share the characteristic being studied. **Sample:** the people from it who take part.
- **From a stem:** "Findings from 50 nurses were generalised to all nurses" gives sample = 50 nurses, population = all nurses.
- **From a core study:** Piliavin et al.: population = New York subway passengers, sample = the passengers in the carriages used; Milgram: population = men in the New Haven area (readers of the local newspaper), sample = the 40 men who took part.

8. Decide who to include in a planned study (2 questions)

1. **Choose criteria that fit the aim** and give a reason linked to it: for a study of loneliness in old age, whether people live alone matters because living alone could affect loneliness on its own.
2. **Exclusions:** leave out people for whom the study would be unsafe or whose data would be misleading (someone too unwell to take part, someone who has done a similar study before), and say why.
3. If the question says "do not refer to sampling techniques", write about **who**, not **how**.

9. Design question that says not to describe sampling (31 questions)

The 10-mark "Describe how X could conduct..." question and its follow-up parts say **do not describe sample, sampling technique or ethics**. Anything you write about sampling there earns nothing and wastes time. Spend the time on the features the question asks for (variables, measures, controls, design, question formats), and choose strengths and weaknesses about the procedure, not the sample.

Worked examples

Example 1

Rafael is investigating whether people who exercise in the morning report a better mood than people who exercise in the evening. He plans to use members of his local gym. The gym has 480 members.

(a) Identify the target population and the sample in Rafael's study. [2]

(b) Describe how Rafael could obtain a random sample of 40 members. [2]

(c) Explain one weakness of random sampling in Rafael's study. [2]

(a) Target population: all the members of the gym (people who exercise at this gym) **(1)**. Sample: the 40 members who take part in his study **(1)**.

(b) Rafael gets the gym's list of all 480 members and gives each one a number **(1)**. He uses a random number generator to pick 40 numbers, and those members are his sample **(1)**. This way each of the 480 members has the same 1 in 12 chance of being chosen.

(c) Some of the members chosen may refuse to take part **(1)**. Members who rarely go to the gym, or who are in a bad mood about exercise, might be the ones who refuse, so the sample would be biased towards keen exercisers with a good mood, whatever time of day they train **(1)**.

Example 2

Dr Okafor wants to use a questionnaire to find out how musicians cope with stage fright. She decides to use volunteer sampling.

(a) Suggest how Dr Okafor could obtain a volunteer sample for her study. [3]

(b) Explain one weakness of using volunteer sampling in Dr Okafor's study. [2]

(c) A colleague suggests handing the questionnaire instead to musicians backstage after concerts at the city's main concert hall. Name this sampling technique, and explain one way in which Dr Okafor's advert would give a better sample. [3]

(a) She could put up a poster asking for musicians to take part in a study about performing **(1)**, on the noticeboards of music schools and concert halls and in an email to the members of a musicians' association **(1)**. The poster and email give her contact details, and every musician who replies becomes a participant **(1)**.

(b) The musicians who reply may be the more confident ones **(1)**. Musicians with severe stage fright might avoid a study about performing, so the sample would show less stage fright than musicians really have **(1)**.

(c) Opportunity sampling **(1)**. Backstage at one hall she would only meet the musicians who play there, but the advert can reach musicians from many different schools, orchestras and styles **(1)**, so her sample is likely to include a wider range of musicians and the results are more generalisable **(1)**.

Example 3

Lena is investigating whether playing puzzle video games improves spatial skills. She uses an opportunity sample: 12 members of her computer games club (11 boys and 1 girl), aged 15 and 16. Each plays for an hour a week for 6 weeks. Over the 6 weeks, 3 of them stop coming to the sessions.

(a) Outline what is meant by opportunity sampling, using Lena's study as an example. [2]

(b) Explain two reasons why Lena's sample may not be representative. [4]

(c) Explain why the participants who stopped coming could reduce the validity of Lena's study. [2]

(a) Opportunity sampling is using people who are available at the time (1): Lena used the members of her own club because they were already there each week (1).

(b) Almost all the sample are boys (1), so the results may not apply to girls, who may differ in how much they play games or in their starting spatial skills (1).

They all already belong to a computer games club (1), so they are used to video games and may improve differently from people who rarely play, so the findings can't be generalised to all teenagers (1).

(c) After 3 drop out, only 9 are left, so a quarter of the sample is lost and individual differences have more effect (1). The ones who stopped might be those who found the games hard or boring, so the people who remain may be the ones who were improving, which would make the games seem more effective than they are (1).

Common mistakes

- **Defining a technique with its own name.** "Volunteer sampling is when people volunteer" and "random sampling is choosing people at random" earn nothing (reports in March 2021, November 2021 and June 2022). Say what happens: an advert and replies; an equal chance from a numbered list.
- **Calling "stopping random people in the street" random sampling.** That is opportunity sampling: not everyone in the population had a chance.
- **Giving the wrong technique for a core study.** Dement and Kleitman is opportunity (or snowball), not volunteer (March 2026 report). Don't use Bandura et al., Hölzel et al. or Perry et al. as examples of any technique: their technique isn't known.
- **Leaving out how volunteers join.** For a volunteer sample, say that the people who reply are the sample; asking people face to face is opportunity sampling (March 2025 report).
- **Thinking payment or volunteering defines a technique or makes it ethical.** Payment can go with any technique, and a volunteer sample still needs consent, the right to withdraw and protection from harm (June 2023 and March 2026 reports).
- **Choosing an unsuitable technique** when the question asks for a representative sample. Use random sampling from a list of the right people (March 2026 report).
- **Writing "it's representative" or "it's quick and easy" with no reason or link.** The second mark is for why, in this study (March 2021 and March 2026 reports).
- **Two weaknesses that are really the same point.** "Small sample" and "can't generalise" are one idea unless you explain different reasons.
- **Describing a sample when asked for a weakness,** or describing the technique when asked for an advantage of one technique over another.
- **Writing about sampling in the design question.** The question says not to, and it earns nothing (reports every year).

- **Mixing up random sampling with random allocation.** Sampling is who is in the study; allocation is which condition they go into.

How to get the marks

- **"Identify" or "state" the technique:** just the name (opportunity, random, volunteer). A description instead of the name may not score.
- **"Outline what is meant by...":** a definition in your own words that doesn't reuse the term, plus a detail.
- **"...using X's study as an example":** one mark is for the link; mentioning the researcher's name and where their participants come from is enough.
- **"Explain one strength / weakness":** the point (1) and why it happens or what it does to this study (1). Generic answers usually cap at half marks.
- **"Explain one advantage of X instead of Y":** compare the two; don't describe X on its own.
- **"Suggest how [the researcher] could obtain a ... sample":** how, where for this population, and how people become participants; three separate steps for three marks.
- **"Explain two reasons" or "two weaknesses":** use two different features of the sample, each with its consequence.
- **6-mark "Describe X and Y, using any example(s)":** up to 2 marks for points and up to 2 for examples per technique; both techniques, and at least one example, or the most is 4. No marks for evaluation.
- **Core studies:** learn each one's sample size, make-up and technique (the table in Understand it). Questions say "from the study by..." and expect facts from that study.

Quick check

1. Define "target population" and "sample".
2. A researcher studying film preferences asks the first 20 people who come out of a cinema on a Sunday afternoon to fill in a questionnaire. Name the sampling technique and explain one weakness of it in this study.
3. Explain why "choosing random people in a shopping centre" is not random sampling.
4. A sports psychologist has a list of all 250 players in a youth football league and wants a random sample of 25. Describe how she could obtain it, and state the chance each player has of being chosen.
5. In a memory study, each participant tosses a coin to decide whether they learn words with pictures or without. A student says this is random sampling. Explain why the student is wrong.

Answers

1. The target population is the whole group of people who share the characteristic being studied, the people the results should apply to. The sample is the people from that population who actually take part.
2. Opportunity sampling (people who happen to be there). Weakness: people at the cinema on a Sunday afternoon have all just chosen to watch a film, and are likely to be people free at weekends (families, students), so their film preferences may not represent people who rarely go to the cinema or who work at weekends; the results can't be generalised to everyone.
3. In random sampling every member of the target population has an equal chance of being chosen. Only the people in the shopping centre at that moment have any chance, and the researcher decides whom to approach, so it is an opportunity sample.
4. Number every player on the list of all 250 players from 1 to 250, then use a random number generator (or draw numbers from a hat) until 25 different numbers are chosen; those players are the sample. Each player has a 1 in 10 chance of being chosen.
5. The coin decides which **condition** each participant goes into, not who is in the study. That is random allocation. Random sampling would be choosing the participants themselves by chance from a list of the population.

Past questions to try

- 9990/22/M/J/24 Q2: explain a volunteer sample from adverts, and one weakness linked to the study.
- 9990/22/M/J/23 Q9: a strength of opportunity sampling, random instead of opportunity, and why a larger sample is better.
- 9990/22/F/M/24 Q5: define population and sample, with examples from social-approach core studies.
- 9990/23/O/N/22 Q9: why an opportunity sample isn't representative, and how to obtain a random sample of 50.