Sociology Factsheet

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Sampling Techniques in Sociological Research

Careful choice of sampling technique is a vital aspect of sociological research because poor choice of participants can invalidate any conclusions drawn from the research.

This Factsheet will examine the different sampling methods available and discuss their advantages and disadvantages.

Exam Hint *You need to be able to explain the choice of sampling method in any research you analyse and any research you conduct. You will also be expected to explain why certain sampling techniques are appropriate for the research conducted.*

How do Sociologists decide who to study?

Before beginning research, the researcher must identify the **target population** – i.e. the group to be studied. This may be students, the unemployed, pensioners for example. Due to the large number of people who fit into these categories, it is not practically possible to use every member of the target population. Therefore, it is necessary to select a small number of people from the target population – this is the **sample.**

In selecting the sample, a **sampling frame**, which is a complete list of all the members of the target population, is required. A sampling frame can be defined as the source from which the sample is drawn. Examples of a sampling frame would include the electoral register or a school register. In some cases the sampling frame would need to include more detailed information e.g. ages, if this is appropriate for the research.

Researchers are often interested in making **generalisations** about the group they are studying. Generalisations are general statements and conclusions that apply not only to the sample but to the target population as a whole. If the researcher is to generalise, then it is essential that the sample is **representative** (typical) of the target population.

There are a number of techniques used by sociologists in order to obtain a sample. These sampling techniques fall into two categories.

Random Sampling	Non Random Sampling
1. Simple 2. Stratified 3. Cluster	1. Systematic 2. Snowball 3. Quota 4. Opportunity 5. Volunteer

The size and type of sample will depend on a number of factors including:

How long the research might take	If the research is to take a long time, some participants may not wish to continue or some may be 'lost' due to moving house etc.
How much funding the research has	Limited funding will limit the size of the study and consequently the size of the sample
How many researchers there are	Just one researcher restricts the number of participants that can be effectively studied
The method used.	Questionnaires can be delivered to many more people than in-depth interviews can in the same period.
Whether the sociologist wishes to generalize 	If the researcher wishes to generalise the findings, a representative sample will be required

Random Sampling

A random sample is where each member of the sampling frame has an equal chance of being selected. If the sample is selected randomly, it is likely that it will mirror the target population, therefore conclusions can be made and generalisations can be drawn.

Sampling Technique	Advantages	Disadvantages
Simple random sample Every individual has an equal chance of selection. Give every participant in the target population a number. Use a calculator, spreadsheet or random number tables to select the individuals in the sample or pull numbers out of a hat 	Only practical for small samples. Simple method. Data analysis simple and has sound mathematical basis.	If the population is very heterogeneous the results can vary considerably. May be difficult to do for large/ dispersed populations.
Stratified random sample This involves dividing the target population into non-overlapping categories called **strata** e.g by age or gender. This will depend on what is significant for the investigation. A sample is then drawn randomly from each sub population. You might therefore have a hat for males and one for females.	If the population is very heterogeneous, it gives a more realistic picture than simple random, and ensures representation of key strata.	Detailed information about the population is required to define the strata. It is crucial to choose the correct stratification according to factors that affect the investigation - this may need to be refined during the investigation.
Cluster sample This is a type of sampling in which the target population is first divided into smaller groups or clusters rather than randomly selected from the whole population. Random samples are then drawn from the clusters. Cluster sampling is usually used when both the population and the desired sample size are particularly large. A village, town or city may be chosen to be representative of a wider area. 	Particularly useful for a very large or dispersed target population. Does not require a complete list of all participants in the target population - just for the clusters chosen.	Clusters may not be representative of the entire population – important subgroups may be left out. Statistical analysis more complicated.

Coursework Hint: For coursework you will only be required to carry out a small scale study and a non random sampling technique will probably be more appropriate. You will need to explain why you have used the technique, explaining the advantages and the disadvantages. When you evaluate your research you should discuss how your sample could have been more representative of the target population if you had used a random sampling technique.

Exam Hint:-
You may be asked in the exam to define terms such as:
what is meant by a "representative" sample *Examiners would award two marks for an appropriate explanation or definition of a representative sample, such as a smaller cross section of the research population or a smaller part that has the same proportionate characteristics as the research population. Simple tautological responses such as 'a representative sample is a sample representing…' will not be rewarded. More successful, responses achieving two marks by means of describing how a representative sample might be constructed or might take into account social characteristics such as age, gender, etc.*

What is meant by a "sampling frame" *Examiners would award two marks for an appropriate explanation or definition, such as: a list of all members of the research population. One mark would be awarded for an example only, such as: electoral roll. Responses suggesting that a sampling frame is a list of members of a research sample will not be rewarded. Answers should be more accurate and detailed and should include an appropriate example to confirm understanding.*

Non Random Sampling

With a non random sampling method, some individuals in the sampling frame have no chance of being selected (eg if you obtained your sample of 18 year old males solely from your college, those not attending it have no chance of being selected)

Non random methods cannot be relied upon to produce representative samples, and they can be susceptible to bias – either by the person doing the sampling or by the people volunteering/allowing themselves to be sampled. However they are generally quicker and easier to use than random methods. They are suitable for pilot surveys and exploratory research.

Sampling technique	Advantages	Disadvantages
Systematic This technique is frequently used when the sampling frame is in a list e.g. school register or electoral roll. This involves applying a system to the selection of participants e.g. taking every *n*th name from the sampling frame. Out of a group of 500 people 50 may be chosen by randomly selecting a number between 1 and 10 e.g. 6, every 10th name from the sampling frame i.e. 6,16, 26,36 and so on is selected as the sample	Easier to carry out than simple random, with less chance of mistakes Particularly useful with large populations. More evenly spread over population than simple random.	Results may be biased (e.g. in a road with houses in terraces, end-terrace houses - which are more expensive - will occur at periodic intervals).
Snowball sampling  A sociologist may be interested in studying a population for which there is no sampling frame e.g. those who work for cash and do not declare it. Without a sampling frame, the researcher would not be able to select a random or systematic sample. Using a snowball sample, the researcher would begin by making contact with one member of the target population, gradually gaining their confidence until that person is willing to tell the name(s) of others	Allows a study to be conducted with participants which would not normally be conducted.	Unlikely to be representative. Difficult and time consuming to collect a sample May raise ethical issues
Quota sampling This is where a researcher will select the a certain number of people from categories or groups such as females, pensioners, in direct proportion to their existence in the population as a whole e.g. 60% the target population is female, so 60% the sample must also be female. People from each category can be selected by any easy method – such as opportunity or volunteer sampling. **Example : Market Research.**	Sampling frame not needed.	Need to know a lot about the population to be studied. Within quota the sampling may be unrepresentative. Assessment of e.g. social class may be subjective.
Opportunity Sample Uses people from the target population who are wiling and available at the time.	Quick and easy to do. Sampling frame not needed.	Unlikely to be representative of the target population.
Volunteer sample  Uses people from the target population who select themselves – e.g. by responding to an advertisement. Researcher merely has to check they are in the target population.	All participants are willing to be involved. Sampling frame not needed. Quick and easy to do.	Self-selected participants are very unlikely to be representative - in many cases they may have a particular "agenda".

Test your knowledge!

1. What is the difference between random and non random sampling?

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2. What is a target population?

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3. What is a sampling frame?

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4. Identify one random sampling technique and identify one advantage and one disadvantage of this sampling technique

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Which sampling technique would you use in the following research?
Give reasons for your choice.

1. You have been asked to research whether there are differences in the games that boys and girls engage in when they are in the school playground area.

2. In recent years there has been a great emphasis on encouraging healthy eating in schools.
   You have been asked to investigate whether the students in your school have healthy eating habits

3. You have been asked to investigate the attitudes towards dieting in young people from different backgrounds.

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