

## Triangulation

Definition: When studying human behavior, more than one method or approach is used.

There are 4 different types of Triangulation:

- **Data Triangulation**- Involves; using different times, locations and participants.
- **Observer Triangulation**- Using more than one observer in a study.
- **Methodological Triangulation**- Using a variety of qualitative and quantitative methods. For example, using quantitative and qualitative methods in a study of prisoner aggression.
- **Theory Triangulation**- Using more than one perspective.

### Advantages:

- Reduces the likelihood of bias from the experimenter/s. Gives a broader idea and indication into the particular item being studied.
- Increases understanding of a phenomenon because of the variety of methods/perspectives used.

### Disadvantages:

Could possibly be too simplistic and or confusing if too many approaches and/or methods are used.

## Interviews

### **Email and Telephone interviews.**

#### Advantages :

- High response rate, Some people like talking over the phone. But this sample bias should be taken into account when working.
- People enjoy filling in email questionnaires and so a higher response rate can be envisaged.
- Sample reached can be very diverse
- Can be done at a fraction of the cost of other types of data gathering.
- Lower tendency for participant to give desirable responses.

### Disadvantages:

- Rapport may be more difficult to achieve, often impossible via email.
- Literacy issues with email responses.
- The lack of visual cues may cause problems in interpretation.

### **Focus groups (small group interviews).**

It originated in market research in the 1920's.

It is now widely used by political parties seeking to assess the likely response to proposed policies and is now a very popular method of data collection in many fields of applied social research.

### Advantages:

- Efficient way of generating substantial amounts of data.
- Participants tend to enjoy the experience.
- The method is relatively inexpensive and flexible.

### Disadvantages:

- Not easy to conduct well. The number of questions covered is limited.
- Confidentiality can be a problem between participants when interacting in a group situation.
- Participants may not be willing to divulge accurate or personal information in a group setting.

**One-to-one interviews:** Addresses the concerns of focus group situations.

The interviewer will sit down with the participant and try and build a relationship through the course of the interview.

### Advantages:

- Participants are more willing to divulge personal information.
- More data rich as only one person is responding.
- Allows a relationship to be built between interviewer and participant and this may yield better results in the future for follow-up interviews.

### Disadvantages:

- Time consuming and expensive.
- Difficult to conduct well.

- Researcher has to keep their subjectivity in check or **report/reflect on it accurately.**

### **Methods of Interviewing.**

#### **Conversational Interviews**

These are unstructured interviews and can be used in all different circumstances.

##### Advantages:

Participants can be interviewed and information gleaned without participants actually knowing they are involved in a study although this has ethical implications/considerations. The main advantage is that conversational interviews make the participant feel relaxed and allow them to speak freely without responding to a specific set of questions.

##### Disadvantages:

Not standardized. Participant can take control of the interview if the researcher does not have proper training or experience.

#### **Structured interview:**

Sometimes referred to as a patterned interview, this type of interview is very straightforward. The interviewer has a standard set of questions that are asked of all candidates.

##### Advantages:

Makes it easier for the interviewer to evaluate and compare candidates. Easier and less time consuming to analyze.

##### Disadvantages:

- Does not yield data rich information as it limits to participant to a structured response.
- Does not engage participant on a personal level and therefore limits amount of information gleaned.

## **Semi-Structured Interviews:**

Semi-structured one-to-one interviews aim to obtain feedback or to explore an issue or service. They can be face-to-face or on the telephone. The interviewer aims to cover a range of pre-set topics, without asking the interviewee to answer specific questions from a limited range of possible answers.

### **Advantages:**

- Answers many of the criticisms of Structured.
- Enables the interviewee to bring to light and consider their own feelings and concerns, allowing more interaction.

### **Disadvantages:**

- Still places limits on what is asked and expected of the researchers.
- Still not fully conversational and therefore might only be appropriate in market research rather than trying to glean information about a personal or traumatic event.

## **Methods of Transcribing.**

### **Traditional.**

Interview is recorded electronically or on tape and the transcribed focusing on the words only.

### **Advantages:**

Quicker and easier than post-modern. Good for market research where deeply held emotions are not being researched.

### **Disadvantages:**

Doesn't take into account participants subtle and often very important non-verbal cues such as; tone of voice, pauses, speech rate etc (see below)

### **Post-modern.**

Researcher decides before hand what non-verbal cues he/she is going to record and then these are taken into account when transcribing. A good researcher will of course respond to these cues when conducting the interview. For example: A participant may use a sarcastic tone of voice when

describing and yet his/her words may say something else. Clearly in this case the participant should be questioned about their motives and true feelings as well as having this taken into account when transcribing.

Examples of non-verbal cues taken into account.

Volume, pitch, speed, pauses, facial expressions, gestures, eye contact, fluidity of argument.

#### Advantages:

- Allows the full interview experience to be recorded rather than just the words.
- Produces data rich and highly detailed analysis.

#### Disadvantages:

- Difficult to maintain reliability across researchers.
- Extremely time consuming.
- Interviews have to be transcribed as soon as possible after the recording so the researcher's perceptions are still fresh.
- Can be distracting for the participant to have their non-verbal cues recorded during the interview.
- Some people gesticulate/use sarcasm/become emotional/talk faster/avoid eye contact/are more lucid more than others. More than one interview would be conducted and time spent with the individual for their non-verbal cues to be assessed and interpreted.

#### Verbal Protocols.

These are used in 'task analysis' so a participant's thoughts can be recorded and analyzed for a particular task. They are defined as: **a record of what people say when they are asked to think aloud as they perform a task.** They are useful for problem solving when learning a new task or evaluating an old one.

#### Advantages:

- Very useful for the participant to verbally describe what it is they are doing.
- Provides on the spot analysis for a particular task that might provide information that might be unobtainable via interview.

### Disadvantages:

- Participants may very well not include vital information in their protocol.
- Participant does need training and practice for them to be useful.
- Trying to produce a protocol while tasking may hinder the performance on the task itself. Some people are not natural communicators or mutli-taskers.

## Questionnaires/Surveys

Surveys are used to find out what is happening in society in areas such as marketing and sales/service.

### **Large Scale surveys (more than 300 people)**

They require a lot of time and processing some taking up to 3 to 4 months to complete assuming there are no problems that would affect turnout. (Weather, flu, computer breakdowns, holidays etc.) However, bty their very nature they are useful as they encompass such a large number of people and their views.

### **Small Scale surveys (from 200-300 people)**

Fewer results to tabulate but still time consuming. Useful in pilot studies to see whether a phenomenon is worth investigating.

### Advantages:

1. Relatively simple and straightforward approach to the study of attitudes, values, beliefs and motives.
2. They may be adapted to collect generalizable information from almost any human population.
3. High amounts of data standardization
4. Often this is the only, or the easiest, way of retrieving information about the past history of a large set of people.
5. They can be extremely efficient at providing large amounts of data, at a relatively low cost, in a short period of time.
6. They allow anonymity, which can encourage frankness when sensitive areas are involved.

### Disadvantages:

1. Data are affected by the characteristics of the respondents (e.g. their memory; knowledge; experience; motivation; and personality).
2. Respondents won't necessarily report their beliefs, attitudes, etc. accurately (e.g. there is likely to be a social desirability response bias - people responding in a way that shows them in a good light).
3. Low response rate
4. Ambiguities in, misunderstandings of, the survey questions may not be detected.
5. May not take it seriously and you may not be able to tell
6. Data may be affected by characteristics of the interviewers and there may be interviewer bias.
7. Data may be affected by interactions of interviewer
8. Respondents may feel their answers are not anonymous and be less forthcoming or open.

A target population has to be first identified and then sampling has to occur from it. The sample cannot be too big as to render effective investigation too difficult. However, it has to be large enough for the relevant analysis to be performed on it. For example: some inferential stats have to have a certain number of participants for them to work.

### **Techniques of Sampling From Target Population**

**Random sampling-** where every member of a target population has an equal chance of being selected. Strength: Provides the best chance of an unbiased representative sample of a target population. Weakness: the larger the population the harder it is to sample randomly so true random sampling is very rare.

**Stratified sampling-** where the population is dividing into subcategories and then selecting members of these subcategories in the proportion that they occur in the target population. Strength: A deliberate effort is made to identify the characteristics of a sample most important for it to be representative of the population. Weakness: Very time consuming since a lot of calculations are involved

**Opportunity sampling**- where selected subjects that are around and available at that time. An effort may be made to not be biased in selected particular types of subjects. Strengths: Quick and convenient and often the most economical method of sampling. It has, therefore, been the most common type of sampling. Weakness: very unrepresentative samples and is often biased on the part of the researcher who may choose subjects who will be 'helpful'.

**Self-Selecting sampling**- individuals who have consciously or unconsciously determined their own involvement in a study. Strength: relatively convenient and, if volunteering is made on the basis of informed consent, ethical. The choice is not biased. Weakness: often unrepresentative because of bias on the part of the subject. Volunteers are unlike non-volunteers in many ways.

### **Use of the Likert scale (Summated rating scale)**

The Likert scale is a scale which is used by psychologists to measure attitude. The Likert scale is used to measure the interest and type of attitude a person has towards something that they find interesting. However when using the scale things often look arbitrary and similar to those in magazine self-rating exercises. The Likert is therefore a survey in its own right that enables psychologists to measure the level of positive and negative attitudes towards a certain subject or thing.

#### Advantages:

They provide a universally recognized rating scale. (Interval data)

#### Disadvantages:

Cumbersome and time consuming to set up. Often a self designed rating scale would be sufficient.

## Observation.

### Participant Observation.

To be a participant observer means that you have already become a member of the observed group. This involves physical presence and sharing of life experiences but also entry into their social and symbolic world. This may sound subjective but experiences and subjective meaning created by participants in social situations are involved in the social world. To interpret these experiences and meanings one must be involved in the situation.

Participant observation and qualitative techniques can be scientific if the observer reports fully their technique and this can be applied to other situations.

The observer is the research instrument, therefore sensitivity and personal skills are called if data is to be collected. This technique is best used in a group setting where the rigours of other methods might disrupt the results. For example, observing people's behaviour in a pub/bar/football match. Not acting out the behaviour of the group in these situations would render the observer visible to the participants and might alter their behaviour if they deemed the researcher's behaviour to be out of the ordinary. Therefore the validity of the research is being increased if the observer is able to blend in with his/her participants.

#### Advantages:

- Allows researchers to blend in with their participants.
- Allows the researcher to be able to subjectively experience what the participants are experiencing and this will add to the study.

#### Disadvantages:

- Observer involvement might influence the behaviour of the group.
- Different observers may have a different experience and interpret the behaviour differently e.g. football crowds,

## **Non-participant observation.**

A way around being accused of influencing group behaviour is to be a non-participant. To be a non-participant means that while observing a situation one does not actually get involved but is a participant in the sense that they are sitting and observing the situation that is happening. This can be done by being passive and completely accepted into the situation.

Awareness and an open mind in observation are needed.

Note taking roles are beneficial, e.g. Student in a library..

Props can be useful, such as bringing a child along with you if you are observing children in a playground or a magazine to read or write in on a bus.

### Advantages:

Allows the researcher to blend in without being noticed and therefore cannot be said to have an impact on the behaviour of the group.

### Disadvantages:

- Researcher is not being involved in the group so cannot be said to be having the subjective experience of the group.
- Any presence by the researcher may affect the behaviour of the participants regardless of their level of involvement.
- If researcher is not participating with the rest of the group this may seem odd. For example: researching the behaviour of a crowd chanting racist slogans. Non participation may alter the behaviour of the crowd and could be dangerous for the researcher.

## **Methods of Recording Data during Observation.**

### **Event Sampling:**

Key behavioural events are recorded every time they occur. E.g. aggression in the playground. Event sampling limits the behaviours being observed and so reduces the chances that the behaviour of interest will be missed. However, other important behaviours will be ignored.

**Time Sampling:**

Behaviour is observed for a specific amount of time or divided up into timed units. E.g. chimpanzee grooming frequency is checked every 5 minutes to see whether it is occurring. Time Sampling reduces the amount of time spent observing which will increase accuracy. However, key behaviours will be missed if random samples are not taken across the day.

**Point Sampling:**

The behaviour of just one individual in the group at a time is recorded. This will increase the accuracy of observation and number of behaviours that can be recorded. However, it may miss the behaviour of others that is important for an understanding of the individual.

**Content Analysis.**

The researcher first decides what media they are going to sample and then devises the coding units they are interested in measuring. The code units are the stage of the analysis and may number in the 100s for only a small amount of content. Coding units are generated by the researcher(s) and are often then first few items that the researcher becomes aware of when reading/listening/watching a piece of discourse. The coding units are there to guide thought and analysis and can be altered any time by the researcher. They are eventually condensed into a manageable amount and the studies results are built around these categories and then discussed.

For example:

**Printed material/literature.**

In order to fully analyze a particular piece of literature coding units could be created and analyzed so the subtleties and messages deep within the text can be identified. The literature could be divided up in terms of chapter/themes: political gender religious /characters/the authors past work etc. This provides a deeper and richer meaning of the text and more thorough exploration of the author's intentions and even unintentional aims.

### **Television, video and film.**

Content analysis can be applied to news programmes to check for fair and accurate reporting. Can be used to check for stereotyping in terms of race/gender/sexual orientation. To check for use of sexual connotations that might not be immediately picked up by any censor. It is also useful to analyze visual art in much the same way as described above.

### **Advertising.**

Often advertisers may use very subtle ways to influence consumers and Content Analysis can be used to identify these methods to make a decision as to whether they are ethically acceptable within that particular culture by the cultural guardians.

For example: in the UK the ASA (Advertising Standards Agency) has deemed it unacceptable to link alcoholic products with sexual attractiveness. Any advert showing an increase in sexual attractiveness as being caused by a particular product will be removed from broadcast. Often this is difficult to police and regulate. **Content Analysis could be used to identify the themes that are generated by an advert on a particular audience to demonstrate that the advert is either acceptable or unacceptable within given guidelines.**

### **Internet and email.**

Content Analysis has been used by the Police to decide which sites to shut down. Email can be analyzed using Content Analysis methods to decide whether someone has been inciting racial hatred for **example even though explicit reference has been avoided by the perpetrator.**

### **Criticism of Content Analysis.**

It is sometimes difficult to arrive at objective coding units. Even if the researcher is satisfied that it has been achieved, problems may lie in convincing others of the reliability, objectivity and validity of the research. The analyst's interpretation can also be open to interpretation and can be subject Content Analysis itself!

## Case Study

The case study itself is not a research method. It uses a wide range of research methods to collect data about a particular case. A case can be; one person, an organization, a city, a group of people, a community, a patient, a school, an intervention, even a nation state or an empire, a situation, an incident or an experience. **A case study is an in-depth, intensive and sharply focused exploration** of the above. Case studies have the following characteristics:

### **Idiographic Approach.**

Researchers are concerned with the particular rather than the general. This can be contrasted with the nomothetic approach, which aims to identify general laws and principles by averaging out individual variation.

### **Holistic Approach.**

Considers the case within its particular context. Cases cannot be considered in isolation.

### **Triangulation is used.**

A range of data collection methods are used to gain an in-depth knowledge of the research area. Triangulation enriches case study and helps researchers appreciate many dimensions of the case. Data collection methods are varied and can involve the following:

Diaries, interviewing, observation, self-reports, official notes and documents (clinical notes). Any method that is deemed appropriate by the researcher.

### **Theory Development.**

Detailed analysis can generate new insights into social and psychological processes and this in turn can give rise to new theories and hypotheses. A good example of this would be Freud. Hamel 1993 claims that all theories are initially based on one particular case or object. Case studies are also very important in testing existing theories by looking at deviant or extreme cases.

### **Advantages.**

- Highly detailed and in-depth.
- High ecological validity of the data gathered. It actually measures behaviour that is representative of behaviour occurring in a natural environment. Often experiments lack ecological validity due to their artificial setting.
- Often the only method suitable for studying forms of rare behaviour.

### **Disadvantages.**

- No cause-effect can be legitimately inferred.
- Lack of generalisability to the population as it is usually a very small or unrepresentative a sample.
- Reliability can be questioned due to; Recall of past events which may be open to memory distortion, lack of observer objectivity.
- Difficult or impossible to replicate.
- Time consuming and expensive.

## **Descriptive Statistics.**

Statistics are used to describe numbers briefly but accurately. The human brain cannot deal with large amounts of data so we need ways to describe that information. When we have done that we sometimes need ways to say what the data means, or **infers**. To do this we use **inferential statistics** to find out if there was an important enough difference between the data sets to say whether or not the IV caused the DV. This important difference is called a **significant difference**-you won't be tested on Inferential statistics on Paper 3. You are simply asked to understand the different ways that Psychologists describe their data.

## **Measures of Central Tendency.**

These measures (called the 'averages') describe how much a data set clusters around a central point. These averages indicate a typical score. There are 3 ways to do this.

### **Mean.**

Add up the set and divide by the amount in the data set. This is fine except it is influenced by extreme values, which can skew a figure and make the

mean appear misleading. If the data is widely spread over a wide range, clusters around extreme values or are unevenly distributed then the mean becomes less reflective or descriptive of the data set.

A way around this is to use the exact numerical centre of the whole data set, which will ignore extreme values. This is called the median

### **Median.**

Place the data set in order and point to the central figure. In the case of an even data set, then add up the two central figures and divide by 2. The median ignores extreme non-representative 'outliers'. However, it is not very good if you have a data set of extreme low numbers and then a few high ones as the median will be more representative of the higher numbers. In this case it wouldn't be very close to the majority numbers of the set. The best 'average' for this is the Mode.

### **Mode.**

The mode is the most fashionable or most popular number. Which ever number occurs the most frequently. If there are two numbers that are equally popular then the data is said to be bi-modal and you have to state what these are. It can be used to indicate a 'normal' or usual figure but it can be easily swayed by a single figure, which can't be said for the mean and the median.

Measures of Central Tendency describe the central points of a data set. However, this doesn't give a complete picture of the data. It doesn't tell us how much the numbers are spread out, or **dispersed**. If we can describe how much the numbers spread out as well as what their central points are then we have a very accurate description of a data set.

## **Measures of Dispersion.**

There are 4 measurements of Dispersion.

### **The Range.**

This tells us over how many numbers altogether a distribution is spread. Easily obtained by subtracting the smallest number from the largest. However, like the mean it is affected by extreme values which may, distort

the picture of the data set.

A small range indicates and a small amount of difference within the data set.

### **The Standard Deviation.**

The average amount all scores deviate from the mean. A large figure indicates a wide spread of scores from the mean. You can see how this might be useful. Once you have obtained your mean it is useful to know how much the whole data set varies or deviates from it.

### **Variance.**

The Variance is the SD squared. It is used to describe more complex data and the larger the figure the greater the variance.

### **Quartile and Semi-interquartile range.**

Data can be divided up into quartiles (or sets of 4) to show how much the data is dispersed within the set. Semi-interquartile range refers to one half of the difference between the first and third quartile.