



Psychology



Mark like an Examiner for A2 Unit 4
Sample Answers

INVESTIGATION ONE:

An experiment on the effect of context on an individual's perception.

Question 1 a

State the null hypothesis from your research. [2]

Sample 1

The null hypothesis for our experiment on the effect of context on an individual's perception is: There will be no difference in the perception of the branded coke in comparison to the unbranded coke due to ratings on a likeness scale.

Sample 2

There will be no difference on the perception ratings on a likeness scale on a neutral face when listening to happy or sad music.

Question 1 b

Describe how you collected your results and justify how they were analysed, using a statistical test, and state whether this led to your results being significant. [10]

Sample 1

The results were collected by asking the individuals to rate the branded coke after tasting it (although the contents was the unbranded coke) and asking them to rate the unbranded coke (both had the same content, however different labels). The individuals were asked to rate the taste of each bottle by using a likeness scale from 1.5. 1 being 'I did not like it' and 5 being 'I really liked it'. Each person provided a pair of data branded score and unbranded score on the likeness scale.

After correcting the data, it was analysed and a critical and observed value was identified. The statistical test used to analyse the data was the Wilcoxon matched pairs test. The reasoning for using this statistical test to analyse the data was because the data provided was ordinal, though the use of a likeness scale from 1 to 5. Furthermore, the experiment investigated a difference between two conditions, the score of unbranded and the branded coke and whether the perception of the coca cola had altered their perception of the drink. Also, the data was provided in a pair from one individual. The score on the likeness scale for the branded and unbranded were both from one individual at a time. As for the explanation as to why we used the Wilcoxon matched pair statistical test was because the experimental design that was used was repeated a measures design as every participant goes through every level of the independent variable groups (branded and unbranded) in order for our test to be significant and to be able to accept the null hypothesis of critical value needs to be higher or equal to the observed value to accept the hypothesis of 25.

The observed value within our experiment was lower than the critical value of 60. This therefore meaning we reject our null hypothesis and accept our alternative.

Sample 2

We collected the data using a likeness scale on a Mann Whitney U test from a scale of 1 to 10 to the participants rated the perception ratings of a neutral face when listening to happy or sad music. The data was significant because we were able to know based on the observed value and critical value that the observed value was lower than the critical value. So we rejected the null hypothesis and accepted the alternative/experimental hypothesis.

Question 1 c

Identify two issues of validity you considered when planning your research and explain how these were dealt with. [3+3]

Sample 1

The first issue of validity that was identified within our experiment was that it would not have internal validity. This is because of confounding variables such as demand characteristics. The individual might guess the aim of the study through the use of clues from the researcher (me). This would happen if the researcher was to give any clues or leading questions in order to accept the experimental hypothesis known as researcher bias. In order to prevent this, a double blind technique was used. This is where both participant and the person conducting the experiment do not know the aims of the study, this meaning no clues can be given indicating the aim for the participants making them alter their behaviour, in turn affecting the result. Consequently meaning if the results were generalised they would not be accurate. Furthermore, another issue of validity which was identified was that the experiment would lack external, population validity. This is because the majority of the population that was available within the location and conducted the study were school students aged 11-18. Thus meaning our results would lack population validity as the participants used do not represent the whole population. In order to avoid this, we ensured that we conducted the study at the time where more adults and teachers were about at break and lunchtime. After conducting a pilot study to test the revised method it seemed suitable. Thus meaning we now had a range of ages and genders representing the wider population, allowing us to generalise our findings.

Sample 2

Two issues of validity that arose when planning the research was ecological validity and population validity.

Ecological validity because the test was not representative to real life situations and population validity because it was opportunity sample used was not representative to the large population as we only chose participants only available on Monday morning before 4 o'clock their pupils who arrived later would not have a chance of participation. To deal with it, it could conduct a face validity test to see if the test is subjective and if it is generalisable to the target population.

INVESTIGATION TWO:

An observation on sharing behaviour.

Question 2 (a i)

Explain how you operationalised sharing behaviour in your observation. [2]

Sample 1

We operationalised sharing behaviour of mobile phones within our observation by ensuring that the population being observed were both male and female and we had data from both genders to suit our hypothesis. Furthermore, we also used behavioural categories when observing, thus ensuring no behaviour was missed.

Sample 2

To operationalise sharing behaviour, we came up with specific behaviour categories. For example, sharing music on a phone through headphones. There were eight behaviour categories and when each behaviour was observed for male or female, a tally was written down.

Question 2 (a ii)

Briefly describe an extraneous variable that wasn't controlled during your observation. [2]

Sample 1

An extraneous variable that was not considered when observing the sharing behaviour of mobile phones, comparing men and women, was the age of those being observed. This could act as an extraneous variable as the older generation do not use mobile phones as much as the younger generation due to mobile phones being more popular nowadays. Thus, meaning that the variable could affect the dependant variable, effecting the results obtained. This meaning that our observation might lack population validity.

Sample 2

An extraneous variable that we could not control was the time of day that we observed behaviour. It was observed throughout the school day and this may have affected results. For example, there may be increased sharing behaviour of phones at school lunch or break time.

Question 2(b)

Briefly describe how you used either time sampling or event sampling as part of your procedure. [2]

Sample 1

Within our experiment we used event sampling through the use of behavioural categories. The observation was conducted and each time that a behaviour within the categories was witnessed it was marked down as a tally within the correct behaviour oral category. We devised the behavioural categories by using prior knowledge of the population activity when using mobile phones.

Sample 2

Event sampling was used in our observation as every time a particular event was observed e.g. sharing a phone for music, it was noted down.

Question 2(c)

Identify two ethical issues you considered when planning your observation and explain how these were dealt with. [3+3]

Sample 1

One ethical issue that was identified when planning the observation was valid consent from the individuals. If we asked the specific individuals we were observing for their valid consent, this would mean the individuals would know that they were being observed, thus meaning they could potentially alter their behaviour. As the observe needed to be covert in order to obtain the most valid results we needed to get presumptive consent. This is where similar members of the population gave their consent so we presume the individuals we are observing would give their valid consent. Thus ensuring that the behaviour observed is as natural as possible, improving the external validity of the observation.

Another ethical issue that we considered when planning the observation was the privacy of the content that was observed. For example, some of the behaviour observed could be deemed as inappropriate. In order to deal with this ethical issue, we ensured that any appropriate content was included within the results. All names remained anomalous. Furthermore, we ensured that we only observed individuals in a public area, for example on a bus or at school.

Sample 2

One ethical issue that we encountered was the issue of content as we were not able to gain consent due to our observation being a covert one. To overcome this, we ensured that no names were taken. Therefore, all results were anonymous. Therefore, results were confidential.

Another ethical issue we encountered was that the results could be harmful to society. For example, they may show that women show less sharing behaviour of phones which may result in them being perceived as more asocial. To

overcome this, we contacted an ethics committee to ensure that the results would not cause harm to society.

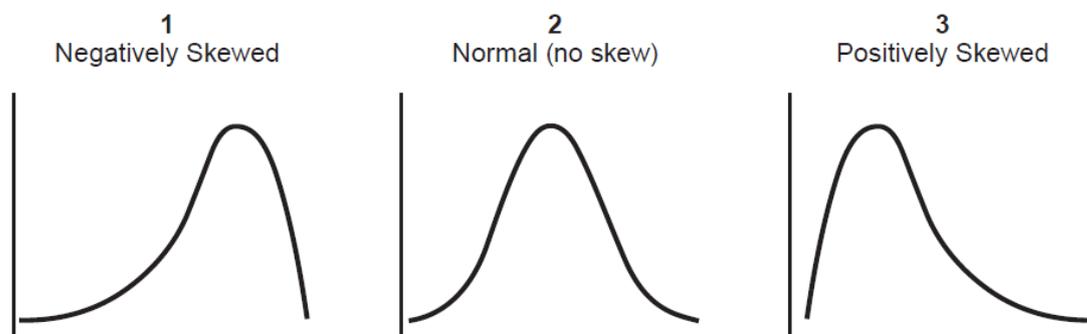
Question 3

A research psychologist was concerned about the rise of obesity throughout the UK. Using a sample of 2000 people from a typical town the psychologist collected data on the participants' weight and age. The psychologist collected descriptive data using measures of central tendency. The results are shown in the table below.

Age	Mean weight (in pounds)	Mode	Median
16-25	122	119	120
26-45	184	196	186

(a) State the level of measurement of this data. Explain your answer. [2]

(b) The data for the age group 26-45 was plotted on a distribution graph. Which of the graphs below (1, 2 or 3) illustrates the above results? Explain your answer. [2]



(c) State what the results tell us about the rise of obesity in this study. [2]

Sample 1

(a)

The level of measurement is nominal as there are two different categories (16-25 and 26-45).

(b)

1 because the mode, mean and medium are not around the centre, they are negatively skewed as they are higher results.

(c)

Results tell us that obesity is not rising consistently as the results are not central.

Sample 2

(a)

This level of data is ordinal as the data collected are numerical data, for example the mean for age 16-25 is 122 and mode is 114 and medium is 120. The data is in categories of mean, mode and medium measuring the weight of age 16-25 and 26-45. The data was in order categories, age and weight.

(b)

The data for the age group 26-45 on a distribution graph show a negatively skewed graph.

(c)

The results state the rise of obesity in this society is that obesity is increasing as people get older throughout the UK between the ages of 16-25 years of age. There is negative correlation between age and weight of the people the data was collected on.

Question 4

A psychologist is interested in bystander intervention. The psychologist wants to see how many people would stop and help a distressed woman, depending on how she is dressed. Explain how you would carry out this study. [15]

In your answer you could include:

- **The experimental hypothesis**
- **Type of experimental method/design**
- **The setting**
- **The sample**
- **Operationalisation**
- **Extraneous variables**
- **Checking reliability**
- **Checking validity**
- **Ethical issues**

Sample 1

The experimental hypothesis for this investigation could be: 'People are more likely to stop in the street to help a distressed woman if she is wearing smart clothes than if she is wearing dirty clothes'. This would be a directional hypothesis. To operationalise this hypothesis to make the study more testable could be: 'A higher number of passers-by on a main street in London at lunch time are likely to stop and help a woman who appears distressed if she is wearing an office suit than if she's wearing old and dirty clothes.'

This type of experiment would be field experiment as it would have to be carried out in a natural environment. If it were in a lab, demand characteristics would become an issue as well as social desirability. This is one way that the study would be made more valid.

The setting used could be a busy street in London or an area where many people walk, for example, outside a train station. The sample would then be an opportunity sample i.e. the people who walk pass at a give time.

To ensure the reliability of this study, it could be carried out on a number of days, both week-days and weekends. This would ensure that there is not just one type of people who will be part of the experiment. In addition, the same researcher should be used to ensure inter-rarer reliability. Different researchers may perceive the way a person acts distressed differently and may interpret the way passers-by help differently.

In order to ensure validity, different areas could be used, for example, outside an office block and in a public park. This would ensure population validity as different groups of individuals are exposed to the situation and we can see how they may react. Furthermore, doing the experiment in the field and in different areas ensures external, ecological validity as we can see whether the behaviour of intervening is the same for all individuals or whether it is the location that has an impact on the number of people who stop to help.

There are extraneous variables that exist that would be very hard to control due to the nature of field experiments, for example, the number of people passing a place at a particular time, however, this can be controlled by choosing the time of day wisely. In addition, the weather could change behaviour, for example, it may be that if it is raining, less people may be willing to stop and help, whereas on sunny weather, they may be more willing.

Validity could also be improved by carrying out the study at the same time of every day (concurrent validity) to ensure behaviour is not due to the time of day.

Finally, some ethical issues involved on deception. The individual is being deceived that the woman's in distress which leads to a possible risk of harm. To overcome this, we could debrief every individual who does stop to help by explaining the study, however, it would not be possible for all passers-by who see the woman in distress.

In addition, due to the experiment being covert, we cannot obtain consent which would lead to issues of confidentiality, however, if we do not record names, individuals are anonymous and privacy is ensured.

We should contact an ethics committee before conducting the experiment to be sure that it does not cause unnecessary harm to any individuals.

Sample 2

The experimental/alternative hypothesis would be there will be different in people who stop and help a distressed woman depending on how she is dressed.

The hypothesis would be a non-directional, two tailed hypothesis because we don't know the direction the study is going because we have not found any previous research so the study would be based on a novel scenario.

The null hypothesis would be there will be no different in people who stop and help a distressed woman depending on how she is dressed.

The experimental method/design would be opportunity sampling so we would choose people only available at the time of study because we will be observing them on their natural environment and how they naturally react. It is a quick and easy method to pick participants, but the disadvantage is that it is not representative of the target population making it biased. The setting would be a field work which means we are observing participants on real life setting, marking IV border to manipulate and harder to control confounding/extraneous variables. It would be a natural and covert observation, meaning participants would not know that they are being observed that could cause confounding variables such as demand characteristics and social desirability bias when participants who know they are being observed by to show themselves in a better light and seem better or desirable.

The sample would be the people of Bangor, Gwynedd at the morning of Monday, however this could cause bias because only people who are not working and on a professional field would be there. So it would be generalisable to the whole target population we would choose the sample with opportunity sampling, so only participants at the time of the study.

To operationalise the variable, we would have a standardised procedure for the observers so they can follow the steps accurately and behavioural categories which will help them collect data for whenever a certain behaviour is seen. However, a pilot study would first have to be conducted to ensure the

standardised procedure and behavioural checklist are measuring what it claims to reassure and check for any extraneous/confounding variables.

Extraneous variables that could arise in this study is time of day and mood of participants. Since it will be early Monday morning, participants would be too tired and drowsy as they have just woken up and it is the start of work week, this could cause them to be insensitive and too busy as they could be going to school or work. This could cloud their judgement and make them do what they normally wouldn't do if they were tired or busy.

To assess reliability we would conduct interrater reliability and if both observers agree on an 80% accuracy based on data collected then the research is reliable and is conducting what it claims to observe. To assess validity, it would conduct a face validity test to check if the research is really measuring what it claims to and whether it is subjective.

Ethical issues that could arise in this study is breaching of privacy and valid consent. Because participants are being observed without their knowledge or consent it could cause issues of consent, also since we are observing and recording their behaviour, it could cause issues of breaching of privacy even though it is in a public place and there is no universal definition of what constitutes a public place. To deal with these issues we would have assumed consent and we would debrief the participants later to let them know what the aim was and if they would like the data based on them to be removed. The dependent variable would be how the woman is dressed and the independent variable is how people react, the intervention and whether people would stop and help her.

The study will not be longitudinal as it would be time consuming to conduct. Behavioural checklist would be body language when seeing a distressed woman, their reaction. If they helped, didn't help or attempted to help and if there were any words exchanged so communication as well. Another behaviour was to see if the bystander affect effected their actions (seeing no bystander helping may make them not want to help to and it is the opposite of someone is helping).

Question 5

A psychologist carried out a longitudinal study into the effects of a new type of anti-psychotic drug. The drug was prescribed to eight men who had suffered from long term mental health issues. The men took the drug each week over a five year period. A questionnaire was given to the men every six months asking how they were responding to the medication and also to record any side effects. The results from the questionnaire were kept confidential.

(a) Briefly describe what is meant by the term 'longitudinal study'. [2]

(b) Identify and explain two disadvantages of using a longitudinal study for this research. [2+2]

(c) Explain why the results from the questionnaire were kept confidential. [3]

Sample 1

(a)

A longitudinal study is a study done on a group of individuals over a long period of time. The same individuals are studied to see if personality or behaviour changes.

(b)

One disadvantage could be that individuals may change significantly over this time. They may no longer have mental health issues, however for reasons of the experiment have to carry on taking drugs when they could be unpleasant or harmful.

Another disadvantage could be that individuals may respond to the questionnaire. With demand characteristics or social desirability because the length of the study may mean that they work out what researchers are looking for and respond accordingly meaning results are not necessarily valid.

(c)

Results were kept confidential because mental illness is a socially sensitive subject and it is the researcher's responsibility to protect individuals from

harm. It is part of the BPS guidelines to protect individuals and if results were released, it would breach the participants' right to anonymity and privacy. The research would not have been accepted by an ethics committee if there was not a promise of confidentiality.

Sample 2

(a)

A longitudinal study means a study that spans a very long time it could be months or years. For example, you could observe the moral dilemma development of a child as he grows up, so you would be observing and collecting data on that child for years until he has fully matured.

(b)

A disadvantage of longitudinal study is that it is very time-consuming as you would have to wait years or months until you could collect results and reach a conclusion. Another disadvantage is since the men are given medication to take for a five year period, they could forget to take medication into time over the course of 5 years. So it could affect the effectiveness of the drug and its effects meaning the data could be spoiled and not taken into consideration any extraneous variables.

(c)

The results from the questionnaire were confidential because to protect the right of privacy and confidentiality of participants or else it could've broken and not followed the ethical guidelines put by the BPS to protect the well-being of participants.