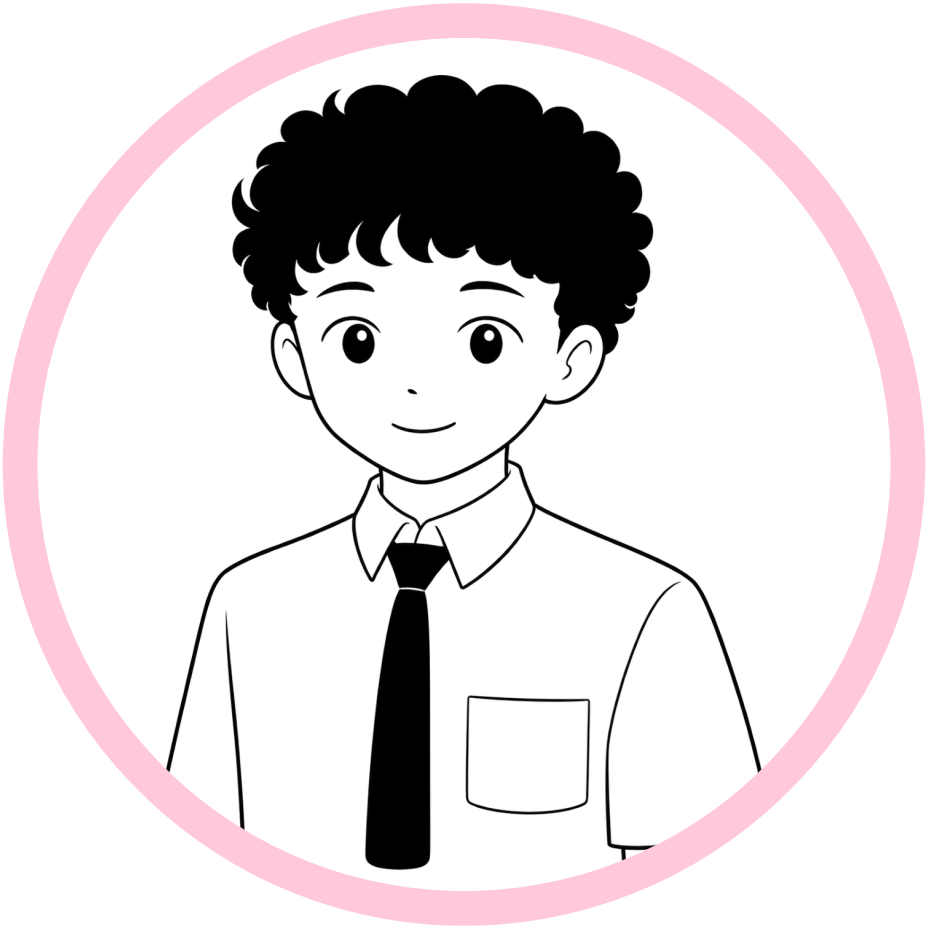
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



MARK SCHEME

3.2.3.1 ETHICS

SCORE	PERCENTAGE
/295	%

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Q1.

(a) **[AO2 = 2]**

2 marks for a clear explanation of why it was important to match the students for this variable.

1 mark for a limited or muddled explanation, or for an answer without application.

Content:

- level of interest could affect their satisfaction scores so needs to be controlled; matching students' levels of interest in business studies keeps this participant variable constant.

2

(b) **[AO2 = 2]**

1 mark for a suggestion of an appropriate variable – interest in using computers (e.g., for studying), past experience of using computers (e.g., for studying), disability issues, prior knowledge of this business studies topic.

Accept other appropriate suggestions.

1 mark for an explanation of how it might relate to satisfaction scores.

2

(c) **[AO2 = 2]**

2 marks for a clear outline of one benefit of random allocation in this situation.

1 mark for a limited or muddled explanation, or for an answer without application.

Relevant points:

- removal of researcher bias in determining which participant has the most to least number of online hours
- increased validity as the researcher will not be biased in how students are allocated
- removal of participant bias as each participant has the same chance of having a particular number of online hours as any other participant.

2

(d) **[AO3 = 3]**

3 marks for a clear and coherent explanation of how stratified sampling would improve the design.

2 marks for some explanation of how stratified sampling would improve the design.

1 mark for a muddled / limited explanation.

Content:

- stratified sampling ensures each identified sub group of the whole target

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population of possible participants is represented in the sample so generalisation of the results to the target population is more valid than if the participants were just available at the time of asking
- stratified sampling is an improvement because people who are identified by opportunity are likely to be present at same time, doing similar things, possibly of similar personality types etc which may limit representativeness of sample.

Accept other appropriate explanation points.

3

(e) **[AO2 = 1]**

1 mark for a question which would generate qualitative data: what did you like / dislike about the online / classroom lessons?

Accept any appropriate question or item that generates qualitative data.

1

(f) **[AO2 = 2]**

2 marks for a clear and coherent explanation of a possible problem.

1 mark for a muddled / limited explanation.

Possible problems:

- analysis of qualitative data relies on interpretation by the researcher which could be inaccurate / biased / subjective
- qualitative data may not be easy to categorise / collate into a sensible number of answer types
- the researcher could be left with lots of individual responses that cannot be summarised.

Do not accept answers which simply identify a problem with no further appropriate elaboration e.g. ‘hard to analyse’, ‘time consuming’.

2

(g) **[AO2 = 1]**

1 mark for an outline of an appropriate ethical issue that would be relevant when using a questionnaire: issues such as anonymity, protection from harm, treating with respect, parental consent.

Possible issues:

- the students should be treated with respect by explaining that their answers will be kept confidential
- the students must be assured that they can withdraw their answers if they want to
- the students must be told exactly what the researcher was trying to find out about the relationship between satisfaction and the way information was delivered.

Answer must be an outline and not just a name or term.

1

(h) **[AO2 = 4]**

Award **1 mark** for each of the following points.

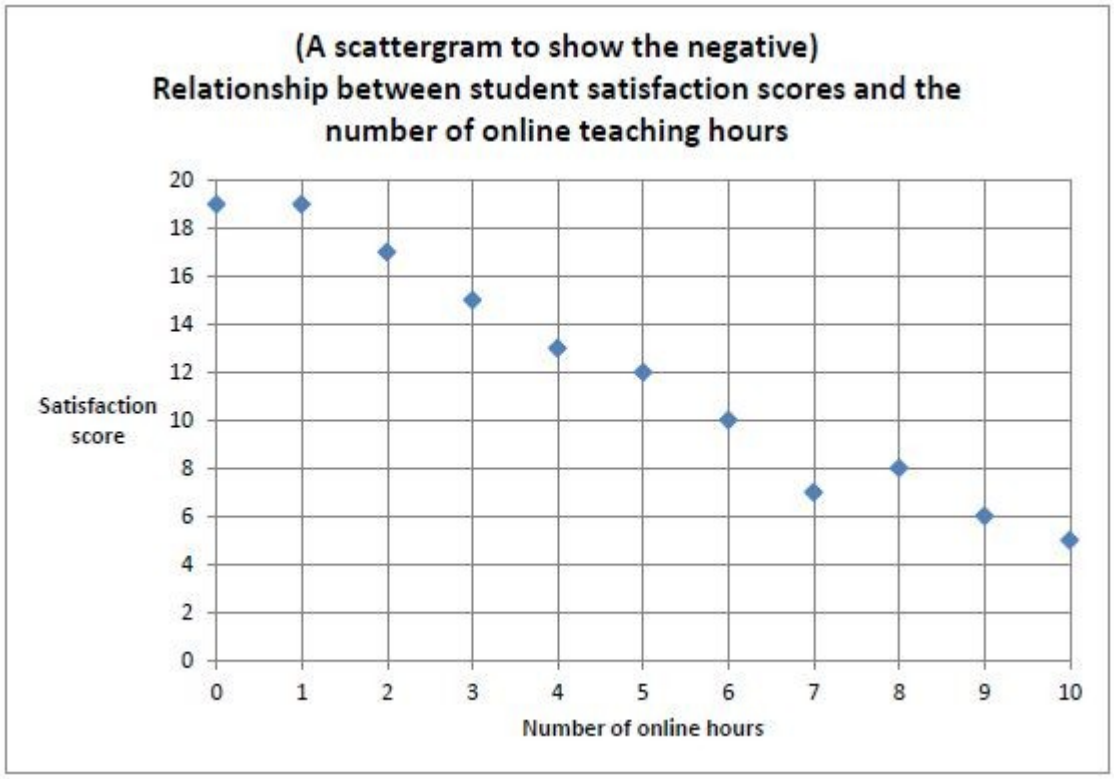
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Content:

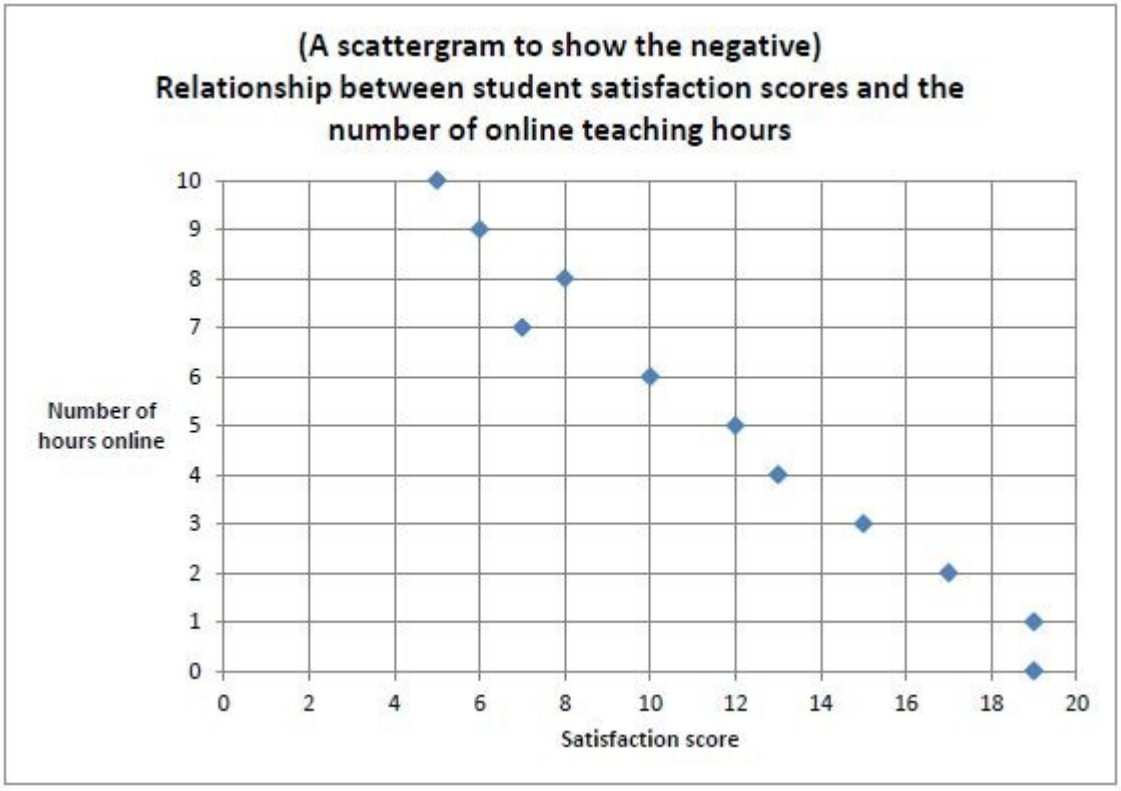
- appropriate title, including reference to (negative) relationship and the two variables
- axis 1 – number of online hours and suitable scale 0-10
- axis 2 – satisfaction score and suitable scale 0-20
- accurate plotting of 11 points on scattergram.

No penalty for drawing a line of best fit.

If display is not a scattergram award max 1 mark if title is appropriate.



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4

(i) **[AO2 = 2]**

1 mark for saying there is a negative relationship / correlation (between the number of online hours and satisfaction scores).

1 mark for further detail e.g. the **more** hours they have online the **less** they are satisfied with the course (or vice versa), however this does not indicate a cause and effect relationship.

Accept other valid conclusions.

2

(j) **[AO2 = 2]**

1 mark for the mode = 19

1 mark for the median = 12

2

(k) **[AO2 = 2]**

2 marks for a clear and coherent explanation.

1 mark for a muddled or limited explanation.

- The median is more representative than the mode because the mode is at the top end of the set of scores, whereas more of the scores are numerically closer to the median.

Accept other explanations, for example, in terms suitability in relation to ordinal data vs nominal data.

2

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(l) **[AO1 = 1]**

1 mark for B

1

[24]

Q2.

(a) **[AO2 = 6]**

Level	Mark	Description
3	5-6	Consent form is well detailed and practical, showing sound understanding of the requirements of a good consent form. All three elements are appropriately represented. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and / or explanation sometimes lacking.
2	3-4	Consent form is mostly detailed and practical, showing some understanding of the requirements of a good consent form. The answer is mostly clear and well organised. Specialist terminology is mostly used effectively.
1	1-2	Consent form only includes basic details of what participants can expect to happen in the experiment or how they will be protected. Knowledge of the requirements of a good consent form is limited. The whole answer lacks clarity, has many inaccuracies and is poorly organised. Generic consent forms without link to the stem.
	0	No relevant content.

Possible content:

Outline of what the experiment entails:

- an explanation of the general purpose of the research
- they would need to watch an assigned horror film every night before going to bed for 7 nights and would need to watch an assigned romantic comedy every night before going to bed for 7 nights
- a daily requirement to truthfully respond to a text message asking whether they had experienced a nightmare
- the two-week duration of the experiment.

Ethical guidelines:

- no pressure to consent
- they can withdraw at any time
- they can withdraw their data from the experiment
- their data will be kept confidential and anonymous
- they should feel free to ask the researcher any questions at any time
- they will receive a full debrief at the end of the programme.

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Format and style of consent form:

- will require the participant's agreement
- could be written as a form that participants need to sign
- could include space for the participant to sign the consent form
- could include a space for the participant to write the date
- could include a space for the participant to print their name.

Credit any other relevant information.

6

(b) **[AO2 = 3]**

3 marks for an appropriate, clear and coherent directional operationalised hypothesis.

2 marks for a statement with both conditions of the IV and a DV that lacks clarity and coherence or has only one variable operationalised.

1 mark for a muddled statement with both conditions of the IV and DV present or where neither variable is operationalised.

0 marks for expressions of aim / questions / correlational / null / non-directional hypotheses or statements with only one condition of the IV present OR if the IV is incorrectly described as group 1 and group 2.

Possible content:

- participants will report more nightmares after watching a horror film before bedtime than after watching a romantic comedy film before bedtime. Accept alternative wording
- participants will report fewer nightmares after watching a horror film before bedtime than after watching a romantic comedy film before bedtime. Accept alternative wording.

3

(c) **[AO2 = 2]**

2 marks for a clear explanation that is linked to the experiment

1 mark for a limited or muddled explanation.

Possible explanations:

- necessary to avoid the effects of individual differences in frequency of nightmares
- film viewing habits, gender, hours of sleep, personality, etc, can have a big impact on the number of nightmares recalled.

Credit other relevant explanations.

2

(d) **[AO1 = 1 AO2 = 1]**

1 mark for each of the following points:

- order effects are likely to occur
- if you saw the horror films in the first week you may still be thinking about

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them / have higher levels of fear in the second week, resulting in more nightmares.

Accept alternative wording.

2

(e) **[AO2 = 3]**

1 mark for each of the following points (up to 3 marks):

- all 50 participants' names / numbers are put into a hat / container / computer
- a name is drawn from the container or a random name is generated by the computer and is assigned to the first group
- a second name is selected as before but this time goes in to the second group; this process continues until there are 25 in each group.

OR

1 mark for each of the following points (up to 3 marks):

- use 50 slips of paper, label 25 'horror' and 25 'romantic comedy'
- put / mix the slips of paper in a hat / container
- each participant draws a group from the container

Note: Credit alternative methods of randomly splitting the sample

3

(f) **[AO2 = 2 AO3 = 2 maths]**

Mean:

1 mark – participants who watch horror films before going to bed report more nightmares then those who watch romantic comedies before bed. Accept alternative wording.

Plus

1 mark – mean number of nightmares reported is greater when horror films are watched than when romantic comedies are watched. Accept alternative wording.

Standard deviation:

1 mark – there is greater dispersion / variation in scores / spread of scores in the horror film condition than in the romantic comedy condition. Accept alternative wording.

Plus

1 mark – standard deviation is greater when horror films are watched before going to bed than when romantic comedies are watched before going to bed. Accept alternative wording.

Note - **0 marks** for just stating the data from the table.

Note – Justifications are not creditworthy in isolation

4

(g) **[AO2 = 2 maths]**

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2 marks for a clear and appropriate explanation in the context of this experiment.

1 mark for a limited or muddled explanation.

This means that the difference in the number of nightmares reported after watching horror films compared to romantic comedies is significant at 0.05 level. This means there is less than 5% (1 in 20) likelihood (probability) that the difference was due to chance / due to something other than the IV.

Accept any other valid answer.

2

(h) **[AO2 = 1 AO3 = 2]**

1 mark for a modification to the design of the experiment that could improve validity.

Plus

2 marks for clear and coherent explanation for how the suggested modification might improve validity of this study.

1 mark for a limited/muddled explanation for how the suggested modification might improve validity of this study.

Possible content:

- include more than one question in the text message to the students. This would make the aim of the experiment less obvious to guess which would in turn reduce demand characteristics and improve the validity of the experiment
- make the conditions less obvious. Rather than having one film the students could be asked to watch an episode from a TV series. The episodes watched in one condition would be those which contained any scary concepts / themes whereas episodes watched in the other condition would not contain any scary themes / concepts
- guarantee anonymity so people will give honest answers and not feel embarrassed
- use a broader sample, not just students. Students may be more or less inclined to watch horror films anyway
- use a different sampling technique to avoid a self-selected sample and thus avoid volunteer bias as that may make them more susceptible to demand characteristics.

Accept alternative answers.

Note: Independent groups design would not be an appropriate modification in this study; however candidates can make the case for a matched pairs design, which could be credit worthy.

3

[25]

Q3.

[AO1 = 3 AO2 = 2 AO3 = 3]

Level	Mark	Description
4	7-8	Knowledge of ethical implication/s of research in

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		psychology is accurate with some detail. Application to topic is effective. Discussion is thorough and effective. Minor detail and / or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5-6	Knowledge of ethical implication/s of research in psychology is evident but there are occasional inaccuracies / omissions. Application to topic and / or discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3-4	Limited knowledge of ethical implication/s of research in psychology is present. Focus is mainly on description. Any application / discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-2	Knowledge of ethical implication/s of research in psychology is very limited. Discussion / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- effects of research on participants
- effects of publication on wider public
- potential use of the findings, e.g. allocation of resources
- potential use of the findings, e.g. political consequences – changes in legislation
- potential bias against people of certain cultures / socioeconomic backgrounds
- potential influence on moral attitudes towards individual / social and ethnic groups
- economic implications, e.g. for further psychological research, e.g. funding etc
- description of relevant evidence.

Possible applications to topic:

- Milgram's obedience research and attitudes to people of different nationalities
- Bowlby's research and the effects on child-rearing / working mothers
- diagnosis of depression, schizophrenia, etc
- labelling, e.g. gender identity
- biological research into addiction / aggression / offending – issue of who is to blame, e.g. if offending / aggression / addiction is inherited
- Piaget's research into discovery learning – changes in education system / classroom practice
- implications of relationship counselling based on research into relationships
- how research into gender might affect parenting / educational practices.

Possible discussion points:

- use of evidence to explain / elaborate / analyse the implications
- how researchers have dealt with the implications

- cost / benefit discussion, e.g. consideration of whether the benefits of publication outweigh the costs
- short-term cost (at time of publication) versus long-term gain (in years to come and for future generations)
- issues of reflexivity - the influential position of the researcher and researcher responsibility.

Credit other relevant material.
Note: any topic in psychology is creditworthy.

[8]

Q4.

(a) **[AO2 = 4]**

1 mark for **each** of the following:

- identify strata / sub-groups in their population, e.g. the four different schools
- calculate the required proportion from each stratum based on the proportion in the population
- select sample at random from each school / stratum / sub-group
- use a random selection method, e.g. assign each student a number then use a computer, calculator or random number table to select specified number of numbers between 0 and X (or hat method).

Credit answers based on other strata / sub-groups, e.g. male and female etc.
3rd and 4th bullet point can only be credited if preceded by strata and proportionality.

4

(b) **[AO3 = 4]**

For **each** suggestion, award marks as follows:

2 marks for a detailed, coherent, relevant suggestion

1 mark for a brief or muddled, relevant suggestion

0 marks for just naming an ethical issue

Possible content:

- confidentiality: advise students that their data is to be kept confidential so their individual responses will not be identifiable and will not be accessible to anyone other than the researchers / their agents
- withdrawal of data: ensure students are told they have the right to withdraw their data after the event even if they consented to the survey and were aware of the aim at the start
- protection from harm: ensure that no one has been upset or offended by questions on the survey, e.g. if they were felt to be intrusive or offensive, or upset by feelings aroused during the survey. If so, then discuss that these feelings are normal etc
- debrief: explain the full purpose / aim of the survey, check again that they are willing to allow their data to be used.

Answers may be verbatim or as above.
Can gain full credit without naming the issue.
Credit other relevant suggestions consistent with BPS guidelines.

4

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(c) **[AO1 = 3 AO2 = 2 AO3 = 3]**

Level	Mark	Description
4	7-8	Knowledge of the attachment theory explanation for parasocial relationships is accurate with some detail. Application is effective. Discussion is thorough and effective. Minor detail and / or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5-6	Knowledge of the attachment theory explanation for parasocial relationships is evident but there are occasional inaccuracies / omissions. Application and / or discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3-4	Limited knowledge of the attachment theory explanation for parasocial relationships is present. Focus is mainly on description. Any application / discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-2	Knowledge of the attachment theory explanation for parasocial relationships is very limited. Discussion / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- parasocial relationships can be linked to attachment problems in childhood (insecure-resistant type)
- characteristics of parasocial relationships as linked to attachment e.g. protest at loss of attachment figure
- Bowlby's noted that failure to attach / poor attachment / insecure attachment led to late problems, e.g. affectionless behaviour, poor internal working model of relationships, delinquency etc
- people with childhood attachment problems form parasocial relationships to meet their need for attachment / affection
- such relationships do not involve same fear of rejection as real-life relationships
- knowledge of theory embedded in evidence.

Possible application:

- according to attachment theory students who reported happy / secure childhood would have positive relationships with friends

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- these students would also be less interested in celebrities because they did not have an unfulfilled need for attachment.

Credit the same ideas expressed in the opposite way i.e. students who reported unhappy / insecure childhood.

Possible discussion points:

- use of evidence to support/refute the attachment theory explanation
- problem of establishing validity of retrospective information about childhood relationships
- parasocial relationships can be positive and are not just about fulfilling attachment, e.g. safe exploration of emotions etc
- implications of accepting the attachment explanation
- discussion in the context of levels of parasocial relationships and other theories, e.g. absorption-addiction model.

Credit other relevant material.

8

[16]

Q5.

(a) **[AO2 = 4]**

1 mark for **each** of the following:

- identify strata / sub-groups in their population, e.g. the four different schools
- calculate the required proportion from each stratum based on the proportion in the population
- select sample at random from each school / stratum / sub-group
- use a random selection method, e.g. assign each student a number then use a computer, calculator or random number table to select specified number of numbers between 0 and X (or hat method).

Credit answers based on other strata / sub-groups, e.g. male and female etc. 3rd and 4th bullet point can only be credited if preceded by strata and proportionality.

4

(b) **[AO3 = 4]**

For **each** suggestion, award marks as follows:

2 marks for a detailed, coherent, relevant suggestion

1 mark for a brief or muddled, relevant suggestion

0 marks for just naming an ethical issue

Possible content:

- confidentiality: advise students that their data is to be kept confidential so their individual responses will not be identifiable and will not be accessible to anyone other than the researchers / their agents
- withdrawal of data: ensure students are told they have the right to withdraw their data after the event even if they consented to the survey and were aware of the aim at the start
- protection from harm: ensure that no one has been upset or offended by

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questions on the survey, e.g. if they were felt to be intrusive or offensive, or upset by feelings aroused during the survey. If so, then discuss that these feelings are normal etc
- debrief: explain the full purpose / aim of the survey, check again that they are willing to allow their data to be used.

Answers may be verbatim or as above.

Can gain full credit without naming the issue.

Credit other relevant suggestions consistent with BPS guidelines.

4

(c) **[AO1 = 3 AO2 = 2 AO3 = 3]**

Level	Mark	Description
4	7-8	Knowledge of Bem's research into androgyny is accurate with some detail. Application is effective. Discussion is thorough and effective. Minor detail and/or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5-6	Knowledge of Bem's research into androgyny is evident but there are occasional inaccuracies / omissions. Application and / or discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3-4	Limited knowledge of Bem's research into androgyny is present. Focus is mainly on description. Any application / discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-2	Knowledge of Bem's research into androgyny is very limited. Discussion / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

Possible content:

- Bem devised the Sex Role Inventory as a measure of androgyny
- BSRI consists of 60 characteristics or traits on which respondents rate themselves on a 7-point scale
- scores translate to two dimensions – masculinity-femininity, androgynous-unclassified
- Bem suggested people who are highly androgynous are more psychologically healthy / have greater mental wellbeing than people who are strongly

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masculine, strongly feminine or undifferentiated
- description of relevant evidence.

Possible application:

According to Bem, students who get a higher androgyny score on the scale should report:

- more positive feelings about themselves and higher self-worth / self-esteem
- relationships with others as more positive / satisfactory.

Credit the same ideas expressed in the opposite way, i.e. students who score lower on the androgyny scale.

Possible discussion points:

- origins and validity of the BSRI – scientifically established relevant traits using a large sample and has test-retest reliability
- BRSI score is an oversimplification – other aspects of life need consideration, e.g. work role, abilities, etc
- being androgynous is not necessarily always positive – a person high in androgyny might possess negative traits, e.g. be excessively competitive
- modification to Bem's original – the addition of undifferentiated type
- social changes, e.g. in typically male and female roles may mean that the BRSI is out-dated
- use of evidence to support / refute BEM's theory about psychological health, e.g. other studies show that a high masculinity score is more healthy
- practical applications e.g. awareness of gender stereotyping.

Credit other relevant material.

8

[16]

Q6.

(a) **[AO2 = 4]**

1 mark for **each** of the following:

- identify <u>strata / sub-groups</u> in their population, e.g. the four different schools
- calculate the required <u>proportion</u> from each stratum based on the proportion in the population
- select sample at <u>random</u> from each school / stratum / sub-group
- use a <u>random selection method,</u> e.g. assign each student a number then use a computer, calculator or random number table to select specified number of numbers between 0 and X (or hat method).

Credit answers based on other strata / sub-groups, e.g. male and female etc.
3rd and 4th bullet point can only be credited if preceded by strata and proportionality.

4

(b) **[AO3 = 4]**

For **each** suggestion, award marks as follows:

2 marks for a detailed, coherent, relevant suggestion

1 mark for a brief or muddled, relevant suggestion

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0 marks for just naming an ethical issue

Possible content:

- confidentiality: advise students that their data is to be kept confidential so their individual responses will not be identifiable and will not be accessible to anyone other than the researchers / their agents
- withdrawal of data: ensure students are told they have the right to withdraw their data after the event even if they consented to the survey and were aware of the aim at the start
- protection from harm: ensure that no one has been upset or offended by questions on the survey, e.g. if they were felt to be intrusive or offensive, or upset by feelings aroused during the survey. If so, then discuss that these feelings are normal etc
- debrief: explain the full purpose / aim of the survey, check again that they are willing to allow their data to be used.

Answers may be verbatim or as above.

Can gain full credit without naming the issue.

Credit other relevant suggestions consistent with BPS guidelines.

4

(c) **[AO1 = 3 AO2 = 2 AO3 = 3]**

Level	Mark	Description
4	7-8	Knowledge of Vygotsky's theory is accurate with some detail. Application is effective. Discussion is thorough and effective. Minor detail and / or expansion of argument is sometimes lacking. The answer is clear, coherent and focused. Specialist terminology is used effectively.
3	5-6	Knowledge of Vygotsky's theory is evident but there are occasional inaccuracies / omissions. Application and/or discussion is mostly effective. The answer is mostly clear and organised but occasionally lacks focus. Specialist terminology is used appropriately.
2	3-4	Limited knowledge of Vygotsky's theory is present. Focus is mainly on description. Any application / discussion is of limited effectiveness. The answer lacks clarity, accuracy and organisation in places. Specialist terminology is used inappropriately on occasions.
1	1-2	Knowledge of Vygotsky's theory is very limited. Discussion / application is limited, poorly focused or absent. The answer as a whole lacks clarity, has many inaccuracies and is poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

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Possible content:

- social interaction / culture are key to cognitive development – child internalises understanding of others
- child as an apprentice who develops tools of a culture, e.g. language, use of technology
- language has an important role: external speech leads to inner speech leads to internalised thought
- emphasises scaffolding – more knowledgeable others / experts act as supportive framework, later withdrawn
- zone of proximal development – gap between what can be achieved alone and what can be achieved with help
- knowledge of theory embedded in evidence.

Possible application:

- students might say they learned better with help / scaffolding from teacher / peers
- students might be able to go beyond their current level of attainment with help (move through ZPD)
- students might describe how they can eventually succeed alone – the scaffolding framework can be removed
- according to Vygotsky, students should learn better in activities that involve scaffolding, e.g. peer tutoring, pair work, teacher demonstration, use of writing frames, etc.

Possible discussion points:

- use of evidence to support / refute Vygotsky's theory about cognitive development, e.g. evidence for improved performance with scaffolding or evidence that shows tutoring does not accelerate learning
- cross cultural differences in concept development show that understanding depends on social interaction / cultural experience
- comparison with other theories of cognitive development, e.g. Piaget's view on the role of language / child as scientist
- assumes all children learn better with social interaction – some children prefer to learn alone.

Credit other relevant material.

8

[16]

Q7.

(a) **[AO2 = 4]**

Level	Marks	Description
2	3 – 4	Explanation of the difference is clear and appropriate, and based on relevant research. The answer is generally coherent with effective use of terminology.
1	1 – 2	Explanation of the difference is evident but lacks clarity. Use of research is limited. The answer lacks coherence and specialist terminology not always used appropriately.

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	0	No relevant content.

Possible explanation for the difference:

- When anxiety/arousal is high, as is the case for Zina, this leads to a decrease in accuracy/detail compared with Amanda. This is supported by research, e.g. Johnson and Scott who found that those in the high anxiety condition were less likely to accurately identify the man; Duffenbacher (1983) meta-analysis found that high levels of anxiety negatively affected the memory of eyewitnesses
- When anxiety/arousal is high, as is the case for Zina, this leads to increased accuracy/detail compared with Amanda. This is supported by research evidence, e.g. Christianson and Hubinette where victims were more accurate than onlookers; Yuille and Cutshall's study where those witnesses that were close to the shooting were accurate, even months later.

Credit any other relevant explanation.

(b) **[AO2 = 2]**

2 marks for a clear and coherent ethical issue that is relevant to the question stem.

1 mark for a muddled answer and/or one that is not made relevant to the question stem.

Possible issues:

- Treating people with respect such as assuring their confidentiality, giving them the right to withdraw, etc
- Protection from harm – Zina and Amanda could experience psychological harm from having to recall the details of the incident again so they could be offered counselling
- Informed consent – the psychologist must gain informed consent, so Zina and Amanda are aware that they will be interviewed about the incident.

Credit any other relevant ethical issues.

Q8.

(a) **[AO2 = 2]**

2 marks for a clearly outlined disadvantage that is explicitly related to the study – sample is biased, lacking representativeness, more confident/helpful/curious which could affect how they respond to therapy or represent other offenders.

1 mark for knowledge of a disadvantage of using volunteers which could be related to the study but this is not explicitly presented.

Credit other relevant disadvantages.

(b) **[AO2 = 3]**

Award **1 mark** for each of the following points up to a maximum of 3 marks.

- All the volunteers are identified either by name or number.
- The 50 names/numbers are put in a container or computer.

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- Assign alternate names/numbers drawn to Group 1 then Group 2 and so on until there are 25 in each group or alternative system **OR** set parameters for two groups of 25 to be randomly generated.

Credit alternative descriptions of a practical procedure which would result in the same outcome.

(c) **[AO2 = 3]**

3 marks for a clearly stated and appropriate non-directional (or directional) operationalised hypothesis: there is a difference in the reduction in anger scores of offenders who complete Therapy A and those who complete Therapy B.

2 marks for a statement with both conditions of the IV and the DV that lacks the clarity of the 3 mark answer.

1 mark for a muddled statement with both the IV and DV present.

0 marks for expressions of aim/questions/correlational hypotheses or statements with only the IV or DV or one condition of the IV present.

Full credit can be awarded for a null version of the hypothesis.

(d) **[AO3 = 3]**

Award **1 mark** for any of the following points up to a maximum of 3 marks.

Possible points:

- Both therapies seem to be effective.
- The pre-therapy scores for both groups suggest that the offenders in Group 1 were more angry on average than those of Group 2 at the start of study.
- The post-therapy scores for both groups suggest that the offenders in Group 1 were more angry on average than those of Group 2 at the end of study.
- Anger scores are lower at the end of the study for both groups suggesting both therapies reduced feelings of anger.
- The improvement in Group 1 is 50-30, a decrease of 20 and in Group 2 is 40-15, a decrease of 25, which suggests that there was a greater reduction in feelings of anger in Group 2.

Credit other relevant points.

(e) **[AO3 = 4]**

Level	Marks	Description
2	3 – 4	The explanation for how matched pairs would have improved the study is clear and the answer identifies the difference in the pre-therapy scores as the issue. The answer is generally coherent with effective use of terminology.
1	1 – 2	There is limited/partial explanation for how matched pairs would have improved the study. The answer may lack coherence. Use of terminology may be either absent or inappropriate. **OR** the answer only xplains matched pairs design in the context of this study.

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	0	No relevant content.

Possible points:

- The researcher wants to be sure that the final anger scores are a result of the therapy and not participant differences between the groups.
- With independent groups participant variables might have caused the lower post-therapy scores for Group 2 rather than the therapy.
- Matching the anger scores of the participants at the pre-therapy stage would reduce this difference – seen in the Group 1 median of 50 which is ten points higher than the Group 2 median of 40.
- Other variables could also affect response to therapy e.g. gender, type of offence.

N.B. Answers that only explain a matched pairs design in the context of this study cannot be awarded above level 1.

(f) **AO2 = 2 AO3 = 2**

2 marks for a clear outline of an ethical issue that might have occurred in the study.
1 mark for a brief or muddled outline of an ethical issue that might have occurred in the study.

- In this study the participants are all in custody so despite the suggestion that they are volunteers they may have been coerced in some way to participate, this could relate to issues of consent or stress or right to withdraw.
- Distress/psychological harm such as: finding out they have high-anger scores; the questionnaire might trigger more anger; finding out there are two therapies and finding out one might be better; therapies might cause more harm than good; the participants might have some expectation that the programme would be effective and this might not be the case.
- Reducing the anger of the participants may be more beneficial for staff than the participants, manipulation of their behaviour for this reason could be unethical.

Plus
2 marks for a clear explanation of how the issue described above could be dealt with. It is expected that withdrawal of data or debriefing would be appropriate answers but these should be clearly matched with the chosen ethical issue.

1 mark for a brief or muddled explanation of how the issue could be dealt with.

Credit other relevant information.

(g) **AO2 = 1**

1 mark for knowledge of an appropriate disadvantage of the median.

Possible answers
- Any outlier values/extreme values (such as the scores of 50) would be ignored/would not form part of the average measurement.
- Less sensitive than the mean.
- It does not represent all the findings.

(h) **AO2 = 2**

2 marks for a clear explanation of how demand characteristics might have occurred

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in the study. The explanation will make clear that participants alter their behaviour in some way because of a belief they have about their participation in the study.

1 mark for a limited or muddled explanation that is linked to the study.

Possible points

- Participants might respond to the questionnaire with answers giving a reduction in anger as they expect the therapy is to reduce anger/they know this is what the researcher expects.
- Participants might 'respond' with an increase/decrease in anger in order to 'ruin' results.
- When the researcher gives out the questionnaire for the second time, this sets up a demand characteristic that the second answers should be different to the first answers.

Credit other relevant information.

(i) **AO3 = 2**

2 marks for a clear discussion of one strength of using questionnaires in research which might include: the ability to collect large amounts of data relatively quickly and conveniently; discussion of how they might be easy to score/collate – when items are closed; reference to standardisation/replication of method.

1 mark for limited or muddled explanation of a possible strength.

N.B If the strength discussed relates to a particular type of questionnaire, the type of questionnaire must be made clear for the second mark.

Credit other relevant strengths.

Q9.

(a) **[AO3 = 2]**

Award **1 mark** for outline of a positive correlation / as one variable increases, so does the other.

and

1 mark – It would not be appropriate because correlation only shows a relationship between the two variables, not cause.

(b) **[AO3 = 2]**

2 marks for a clear, coherent outline of an appropriate way of dealing with a relevant ethical issue.

1 mark for a vague / muddled or incomplete outline of an appropriate way of dealing with a relevant ethical issue.

0 marks if the ethical issue is irrelevant or the way is inappropriate.

Relevant issues would include:

- asking for consent
- preferably written and on more than one occasion

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- offering the right to withdraw from the study
- maintaining confidentiality
- treating with respect.

(c) **[AO3 = 4]**

Award **one mark** for each of the relevant points below:

- the same participants would complete the sleep questionnaire on more than one occasion
- each participants' scores from the first occasion should be correlated with his / her results from the later occasion to be shown on a scattergraph to describe the correlation, with scores from the first test plotted on one axis and the scores from the second test plotted on the other axis
- the strength of the correlation should then be assessed using either a Spearman's rho test (or a Pearson's r test)
- the degree of reliability is then determined by comparing the correlation with the statistical table to determine the extent of correlation – there should be a (strong) positive correlation between the two sets of scores.

Q10.

[AO2 = 12]

Level	Marks	Description
4	10 – 12	Suggestions are generally well detailed and practical, showing sound understanding of observational techniques. **All four** elements are present. There is sufficient information for most aspects of the study to be implemented with success. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and / or explanation sometimes lacking.
3	7 – 9	Suggestions are mostly sensible and practical, showing some understanding of observational techniques. **At least three** elements are present. Implementation of some aspects is possible. The answer is mostly clear and well organised. Specialist terminology is mostly used effectively.
2	4 – 6	Some suggestions are appropriate but others are impractical or inadequately explained. **At least two** elements are addressed. Implementation would be difficult based on the information given. The answer lacks clarity, accuracy and organisation on occasions.
1	1 – 3	**At least one** element is addressed but knowledge of observational techniques is limited. Implementation would be very difficult. The whole answer lacks clarity, has many inaccuracies and is poorly organised.
	0	No relevant content.

Four elements of design to be credited:

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- **The task for the participants** – detail of what the men and women in the study will have to do. This must go beyond 'give a presentation to an audience'.
- **The behavioural categories to be used and how the data will be recorded** – detail of specific and observable behaviours to be recorded. This must go beyond the idea of global constructs such as 'body language' or 'gesture'. Also detail of recording method to be used, eg record sheet.
- **How reliability of the data collection might be established**, eg using two observers / raters and comparing separate recordings; statistical comparison of data from both observers / raters.
- **Ethical issues to be considered**, eg specific or more general ethical considerations as applied to this study – protection of welfare, confidentiality and deception, respect or integrity.

Examples of possible tasks:

- presentation of findings from a school project
- presentation on 'My Hobby'
- presentation on 'My Holiday'.

Examples of suitable non-verbal behaviours include:

- arm movements
- smiling
- speech hesitations
- pointing etc.

Q11.

[AO2 = 9]

Level	Marks	Description
3	7 – 9	Suggestions are generally well detailed and practical, showing sound understanding of design of an experiment. **All three** elements are present. There is sufficient information for most aspects of the study as required to be implemented with success. The answer is clear and coherent. Specialist terminology is used effectively. Minor detail and/or explanation sometimes lacking.
2	4 – 6	Some suggestions are appropriate but there may be a lack of detail. At least **two** elements are addressed. Implementation may be difficult given the lack of information. The answer is mostly clear and organised. There is some appropriate use of specialist terminology.
1	1 – 3	**At least** one element is addressed but knowledge of task design or dealing with participants is limited. Successful implementation would be difficult given the information provided. There is substantial inaccuracy/muddle. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

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Possible content:

- **The task:** the answer must show an appreciation of the fact that the usual way of merely sorting a shuffled pack of cards into suits will have to be modified in order to ensure that each participant has exactly the same task. [Initial shuffle, record the order, reinstate that order for each participant.]
- **Suitability of participants:** the answer must include information about how familiarity with cards could become a confounding variable if not controlled and how this could be controlled practically.
- **Ethical issues:** specific or more general ethical considerations as applied to this study – protection of welfare, confidentiality, respect or integrity.

Q12.

(a) **[AO2 = 4]**

Level	Marks	Description
2	3 – 4	Knowledge of both holism and reductionism is clear and mostly accurate. Application to the scenario is mostly appropriate. The answer is generally coherent with effective use of psychological terminology.
1	1 – 2	Some knowledge of holism and/or reductionism is evident. Application to the scenario is not always effective or not presented in psychological terms. The answer lacks accuracy and detail. OR Either holism **or** reductionism explained and applied at Level 2.
	0	No relevant content.

Application:

- Holism – focus on the whole system or person
- Reductionism – focus on constituent elements or smaller, simpler aspects
- Dr Grant takes a reductionist approach focusing just on biological mechanism
- Dr Austin takes a more holistic approach focusing on broader experiences and circumstances

Credit other relevant material.

(b) **[AO3 = 1]**

1 mark for a brief valid suggestion

Possible suggestions:

- Keep information confidential
- Show respect for the patient eg listening, appreciating the patient's perspective

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- Ensure the patient is not harmed – does not feel worse after the interview than before

Credit other relevant suggestions.

Q13.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

Although the essential content for this mark scheme remains the same, mark schemes for the new AQA Specification (Sept 2015 onwards) take a different format as follows:

- A single set of numbered levels (formerly bands) to cover all skills
- Content appears as a bulleted list
- No IDA expectation in A Level essays, however, credit for references to issues, debates and approaches where relevant.

(a) **AO3 = 4**

Suitable behavioural categories for investigating children's aggressive behaviour could be:–
pushing, hitting, biting, punching, swearing, etc.
Maximum 2 marks – 1 for each suitable behaviour category.
Candidates may suggest recording playground behaviour on CCTV for later analysis by ticking a box when a relevant behaviour is shown by the child. Alternatively the researcher could watch each child's behaviour in the playground and tick the box when each behaviour is shown. In this case where the researcher stands and whether the children know they are being observed would be relevant.
1 mark for a very brief or slightly muddled explanation e.g. use a tally chart
2nd mark for accurate elaboration

(b) **AO3 = 4**

There are no ethical issues named in the specification, so any potentially relevant issues in this research should be credited.
Although the psychologist would not be responsible for the behaviour of the children in the playground he might consider his responsibility if he saw that one of the children was being harmed.
Likely ethical issues include informed consent, right to withdraw, confidentiality or respect. Ways of dealing will depend on the issue selected.
There are different routes to achieving 4 marks depending on the ethical issue selected, but for full marks both the ethical issue and how the psychologist could have dealt with it should be clear.

AO3 Knowledge of research methods
4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound understanding of one relevant ethical issue and how the psychologist could have dealt with this issue.

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3 marks **Less detailed but generally accurate** answer that demonstrates relevant understanding of one relevant ethical issue and how the psychologist could have dealt with this issue. or **Accurate and reasonably detailed answer** that demonstrates sound understanding of one relevant ethical issue or how the psychologist could have dealt with an issue.
2 marks Basic Basic answer that demonstrates some relevant understanding of one relevant ethical issue and / or how the psychologist could have dealt with an ethical issue, but lacks detail and may be muddled.
1 mark Very brief / flawed Very brief or flawed answer demonstrating very little understanding of a relevant ethical issue and / or how the psychologist could have dealt with an issue.
0 marks No creditworthy material.

(c) **AO3 = 4**

There are different routes to full marks in this question. Candidates explain one advantage in reasonable detail or more advantages in less detail. Advantages of using an interview rather than a questionnaire could include it would allow the interviewer to clarify questions and answers; it might be easier to see if participants were answering honestly because their reactions could be observed; it is easier to collect detailed qualitative data.

AO3 **Knowledge of research methods**
4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound understanding of one or more advantages of using interviews rather than questionnaires in this situation.
3 marks Less detailed but generally accurate Less detailed but generally accurate answer that demonstrates relevant understanding of one or more advantages of using interviews rather than questionnaires in this situation.
2 marks Basic Basic answer that demonstrates some relevant understanding of one or more advantages of using interviews rather than questionnaires in this situation, but lacks detail and may be muddled.
1 mark Very brief / flawed Very brief or flawed answer demonstrating very little understanding of one or more advantages of using interviews rather than questionnaires in this situation.
0 marks No creditworthy material.

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Q14.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

(a) **AO3 = 1**

Volunteer / volunteering or self-selected / self-selecting sample. 1 mark
Voluntary 0 marks.

(b) **AO3 = 2**

A limitation of a volunteer sample is that it is biased / not representative (1 mark) because some people are more likely to volunteer than others (1 mark) or the findings cannot be generalised to a population (1 mark).

1 mark for a very brief or slightly muddled explanation eg it is biased. 2nd mark for accurate elaboration. For 2 marks the answer must relate explicitly to volunteer sampling.

(c) **AO3 = 2**

IV The interview, type of interview, method of interview, 'standard interview or / and cognitive interview', whether or not cognitive interview.
DV Number of items recalled, recall, what they remembered.

(d) **AO3 = 2**

There is better control because the same film can be used in both conditions. The participants are less likely to show demand characteristics because they take part in only one condition. There are no order effects such as practice or fatigue, because participants take part in one condition. 1 mark for very brief or slightly muddled advantage. 2nd mark for accurate elaboration.
0 marks for simply stating there are different participants in each condition or takes less time.

(e) **AO3 = 3**

The question asks about recruiting participants, so answers referring to debriefing are not relevant.
There was no deception. Participants knew they would be watching a film of a violent crime and that they would be interviewed about the content by a male police officer before they volunteered. This gave them the opportunity to give informed consent.
Students may argue that the psychologist did not follow BPS guidelines eg because they were not told of their right to withdraw.

1 mark for a very brief or slightly muddled answer, linking a relevant ethical issue to whether or not awareness was shown. Further marks for accurate elaboration / discussion.

Eg He told them what he was going to do. (1 mark) They could give informed consent because he told them what he was going to do. (2 marks) The participants were told that they would be watching a violent crime so they were

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able to give informed consent. (3 marks)

Q15.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

(a) **AO3 = 3**

Advantages of using a questionnaire in this study could include that data from the hundred adults could be collected relatively quickly because the researcher would not need to be present when the questionnaires were completed; participants might be more willing to answer honestly because they would feel more anonymous; there might be a reduction in investigator effects because the researcher's reactions would not be visible. The advantage must be one that could be applied to this study.
1 mark for a slightly muddled or very brief outline of an advantage. Further marks for accurate elaboration.

(b) **AO3 = 2**

Qualitative is non-numerical and uses words to give a full description of what people think or feel.
1 mark for a very brief or slightly muddled answer eg qualitative data uses words.
2nd mark for accurate elaboration eg by comparison or by using an example.

(c) **AO3 = 2**

One mark for a question which would produce qualitative data but is not appropriate eg "How are you feeling?"
Two marks for an appropriate question eg "Tell me what it was like in the institution"
(Full marks can be awarded if it is not in the form of a question)
0 marks for a question that would not produce qualitative data.

(d) **AO3 = 1 + 1 + 3**

There are no ethical issues named in the specification, so any potentially relevant issues should be credited.
Likely ethical issues include informed consent, right to withdraw, protection from harm, confidentiality, respect or the need for debriefing in this particular case.
Other issues such as deception (deliberate or by omission) can be credited as they could apply in this research.
One mark each for identification of a relevant ethical issue.
One mark for a brief mention of how the issue could be dealt with.
Two further marks for elaboration appropriate to this research.
There is a depth / breadth trade-off. Candidates may explain one way of dealing with the issue in some depth, or mention several ways (of dealing with one issue) more briefly. Ethical issue one eg, right to withdraw (1 mark); ethical issue two eg confidentiality
(1 mark); Don't identify the participants (1 mark). Don't use photographs or names in published research. Names of people and / or places should be changed (2 further marks).

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Q16.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

(a) **[AO3 = 2]**

One mark for an appropriate conclusion. One further mark for explanation / justification of the conclusion.

Possible answer: Participants in Group B were influenced by / conformed to / went along with / were led by / affected by the other estimates they had seen (1 mark for conclusion) because the median estimate for Group B was closer to the scores on the list (1).
Accept 'higher than' Group A.

(b) **[AO3 = 2]**

One mark for identification of the IV, ie whether participants saw 5 other supposed estimates or not

OR

whether participants wrote their estimates on a blank piece of paper or below 'other' estimates.

One mark for identification of the DV, ie the estimated weight of the cake.
Accept 'estimate'.

(c) **[AO3 = 3]**

Up to 3 marks for an explanation of how stratified sampling is achieved.
Answer may be expressed in terms of pupils from a secondary school.

One mark each for reference to the following points:

- identification of strata
- proportions to be worked out
- random selection (within the strata)

(d) (i) **[AO3 = 2]**

Up to 2 marks for an explanation of how the psychologist could have allocated the participants randomly to the two groups.

Possible answer: Each participant in the sample could be given a number which is put into a hat. The first 50 numbers drawn out of the hat would be allocated to one of the groups.
Or
50 A's and 50 B's could be put in a hat and each participant draws out a letter. The letter designates the group.

Credit alternative method

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(ii) **[AO3 = 2]**

One mark for an appropriate reason. One further mark for an explanation of that reason. Random allocation will reduce the likelihood of individual differences affecting the outcome.

Possible answer: Random allocation reduces researcher bias (1) and makes it more likely that the manipulation of the IV caused the results (1).

Accept increasing validity but do not accept reference to increasing reliability.

(e) **[AO3 = 2]**

One mark for a plausible reason.

Likely answers: to prevent the participants guessing aim of the study / naivety; to prevent order effects.
Credit reference to the illogical nature of using the same participants in both groups in this study.

One mark for relating the reason to the study.

(f) **[AO3 = 3]**

One mark for knowledge of an appropriate ethical issue.

Likely answers: deception; consent; confidentiality, etc.
One mark for elaboration of the ethical issue or why the issue is important.One mark for relating the issue explicitly to the study.

Note: INFORMED consent is only to be given **any** credit if candidate explains how it would be totally inappropriate in this study. Such a response could achieve full marks if candidate goes on to explain how use of debrief would be a way of compensating for lack of information beforehand.

(g) (i) **[AO3 = 2]**

Up to 2 marks for an outline depending on detail.
Likely answers: a structured interview (1) in which the questions asked are prepared and in a set order. (1)
An unstructured interview (1) in which the researcher has an aim but no predetermined questions. (1)

Accept other types of interview, eg face-to-face, group, one-to-one, telephone.

(ii) **[AO3 = 2]**

Up to 2 marks for a limitation of the chosen interview method that is elaborated.

Structured interview: possible answers – no deviation from predetermined questions is allowed (1) this means that an unexpected response cannot be pursued for more detail. (1)
Or, structured interviews are more formal (1) and this might make it a

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more uncomfortable experience for the interviewee. (1)

Unstructured interview: possible answers – the data are difficult to analyse (1) as all the responses are individual and therefore hard to collate / summarise. (1)
Or, unstructured interviews may produce irrelevant information (1) because it is easy for the interviewer and / or interviewee to go off the focus or point of the investigation (1).

Accept other valid responses eg comparison with other types of interview.

Q17.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

Although the essential content for this mark scheme remains the same, mark schemes for the new AQA Specification (Sept 2015 onwards) take a different format as follows:

- A single set of numbered levels (formerly bands) to cover all skills
- Content appears as a bulleted list
- No IDA expectation in A Level essays, however, credit for references to issues, debates and approaches where relevant.

(a) **AO3 = 2**

Confidentiality could be maintained by making sure individuals are not identifiable when reporting the case study. This could be done by using a different name or initials, avoid publishing details of address, schools etc.

1 mark for identification of a relevant way.
2nd mark for some elaboration (which could be an example) or for identification of a second way of maintaining confidentiality.

(b) **AO2 = 2**

Psychologists may use psychological tests eg IQ testing. They could observe his behaviour in different situations. They might interview people, such as family members, to find out the circumstances of his early life.

1 mark for simply naming any appropriate techniques such as IQ test, observation or interviews.
2nd mark for some elaboration.

(c) **AO3 = 4**

The main limitation is that each individual, and their experience, is unique and the results cannot therefore be generalised to others. Evidence from an individual's past may be difficult to verify.
Researchers may get to know the individual well, which may lead to loss of objectivity.

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Although description of specific case studies is not relevant, candidates may refer to examples as part of and explanation of limitations.

AO3 Knowledge of limitations of case studies
4 marks Accurate and reasonably detailed Accurate and reasonably detailed answer that demonstrates sound knowledge of at least one limitation.
3 marks Less detailed but generally accurate Less detailed but generally accurate answer that demonstrates relevant knowledge of at least one limitation.
2 marks Basic Basic answer that demonstrates some relevant knowledge of one or more limitations, but lacks detail and may be muddled.
1 mark Very brief / flawed Very brief or flawed answer demonstrating very little knowledge of limitations.
0 marks No creditworthy material.

Q18.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

(a) **AO3 = 2**

This is a natural experiment because the independent variable, whether the children attend nursery or are looked after by a child minder is a naturally occurring variable.
1 mark for brief or muddled explanation eg the children went to nursery anyway.
2 marks for accurate explanation eg the psychologist didn't decide which type of day care the children attended.
Reference to an independent variable should be credited but is not essential for 2 marks.
Answers which refer only to research carried out in a real life situation should not receive credit.

(b) **AO3 = 2**

There are a number of ways in which the children's aggressive behaviour could be measured. These include observation and recording the behaviour in categories. Alternative methods such as interviews or questionnaires given to parents or teachers would be relevant.
1 mark for naming or identifying a relevant method eg observation, using a tally chart.
2nd mark for further detail relevant to measuring aggressive behaviour in children.

(c) **AO3 = 4**

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Candidates are likely to refer to informed consent from parents and maintaining confidentiality. Parents' right to withdraw child or data and possible deception would also be relevant. As children are five years old consent from the children could be credited as well as informed consent from parents. In addition to BPS guidelines, issues such as socially sensitive research should be credited.
For each, 1 mark for identification of a relevant issue.
2nd mark for some elaboration eg implications of the issue.

Q19.

AO3 = 2

Ethical issues could include:

- Informed consent
- Right to withdraw
- Protection from harm
- Anonymity
- Confidentiality
- Deception.

Any relevant ethical issue can receive credit, but the question requires candidates to explain the ethical issue.
1 mark for identifying the ethical issue and a further mark for the explanation. For example, confidentiality is an issue because when investigating stress the participant might be disclosing personal information that they want to keep private.

Q20.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

- AO1 knowledge and understanding
- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

(a) **AO3 = 3**

This is a volunteer / self–selected / voluntary sample.
Only people who read this newspaper could take part. The participants have chosen to take part, so it is a biased sample. Findings cannot be generalised to a wider population.
Volunteer sample or self-selected sample (1 mark).
Candidates can receive credit for a correct outline of a relevant disadvantage of volunteer sampling even if they have not identified the correct sampling method.
1 mark for a brief disadvantage. Eg It is biased.
2nd mark for some elaboration eg It is a biased because only some people who read the newspaper respond and they may not be typical of all readers.

(b) **AO3 = 3**

Any relevant issue should be credited.
Likely ethical issues include informed consent, right to withdraw or confidentiality.
1 mark for identification of a relevant ethical issue.
1 mark for a brief mention of a way of dealing with an ethical issue. Further mark for elaboration.
Eg Confidentiality (1 mark). Keep the participants details private (1 mark).

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The psychologists should not use the participants' names in published work, or allow them to be identified in any way (2 marks).

Q21.

(a) **AO2 = 2**

Digit span is normally considered to be 7+ / –2, so Peter's was much shorter.
1 mark for simply stating his digit span was shorter than normal.
Second mark for an explanation of the difference, eg Peter's digit span of two items was much shorter than the average span of around 7 items.

(b) **AO2 = 4**

The MSM suggests there are separate ST and LT stores. Peter's short-term memory was impaired, but his long-term memory was not. This supports the idea of separate ST and LT stores, because one was damaged but not the other.

One mark for some reference to separate ST and LT stores. Three further marks for elaboration of the explanation.

Alternatively, candidates could suggest the evidence goes against MSM. If memory has to pass through the ST store to reach the LT store, it is likely that damage to the ST store would impair the transfer. Candidates could legitimately refer to evidence both for and against the model.

(c) **AO3 = 4**

There are no ethical issues named in the specification, so any potentially relevant issues should be credited.
Likely ethical issues include informed consent, right to withdraw, confidentiality or respect.
Candidates may point out that as the man has brain damage, his ability to give informed consent might be in doubt.
One mark for identification of a relevant ethical issue.
One mark for a brief mention of how the issue could be dealt with. Two further marks for elaboration.
For example: confidentiality (1 mark); keep the man's details private (1 mark); the psychologists should not use the man's name in published work, but could use his initials instead (2 further marks).

Q22.

Please note that the AOs for the new AQA Specification (Sept 2015 onwards) have changed. Under the new Specification the following system of AOs applies:

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- AO2 application (of psychological knowledge)
- AO3 evaluation, analysis, interpretation.

Although the essential content for this mark scheme remains the same, mark schemes for the new AQA Specification (Sept 2015 onwards) take a different format as follows:

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- No IDA expectation in A Level essays, however, credit for references to issues, debates and approaches where relevant.

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(a) **AO2 / 3 = 2**

One mark for one brief finding and a further mark for appropriate elaboration or for two brief findings or one mark for a slightly muddled answer.
On average, the treatment group showed greater improvement after the treatment than the no-treatment group. The average improvement score for the no-treatment group was very low suggesting that the treatment gains for the treatment group were not simply a result of the passage of time.

There was some variation in both groups as shown by the ranges but it was wider in the treatment group. The low range in the no-treatment group suggests that most people in this group had similar low improvement scores.

(b) **AO1 = 1, AO2 / 3 = 3**

One mark for identification of a suitable test and 3 further marks for an appropriate justification.The specification only requires knowledge of non-parametric tests. However, if a candidate names an independent t-test and justifies its use, this is perfectly acceptable. It is likely that most candidates will identify a non-parametric test. The most appropriate test is the Mann-Whitney and the justifications for its use are:

- independent groups design
- at least ordinal data
- differences.

(c) **AO2 / 3 = 2**

One mark for correctly identifying the likelihood and one further mark for an appropriate explanation or one mark for a slightly muddled answer.

The likelihood of making a Type 1 error is 5%. A Type 1 error occurs when a researcher claims support for the research hypothesis with a significant statistical test, but in fact, the variations in the scores are due to chance variables. If the level of significance is set at 5%, there will always be a one in twenty chance or less that the results are due to chance rather than to the influence of the independent variable or some other factors.

(d) **AO2 / 3 = 4**

Two marks for each reason. One mark for a basic identification and one further mark for elaboration.

Possible reasons include:

Expectations – the patients might expect the treatment to do them some good and it becomes a self-fulfilling prophesy.

Biased sample – even though the participants were randomly assigned to groups, the treatment group might, by chance have included more people with milder symptoms that were more likely to respond to treatment.

Other support – we do not know what other support/ treatment that the participants might have had over the 8 week therapy period.

(e) **AO2 / 3 = 4**

Two marks for the advantage and two marks for the disadvantage. One mark for

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simply identifying an advantage / disadvantage and the further mark for elaboration in the context of the study. Answers which are not set in context cannot achieve full marks.

Advantage: Much quicker to administer and to score – could all have been given out at the same time whereas the therapist has to conduct 30 time-consuming interviews; cheaper than interviews, ie in terms of the therapist's time; people might be more comfortable, and, therefore, more honest, if they have to write responses rather than face an interviewer (could work the other way as well – see disadvantages).

Disadvantage: Self-report questionnaires might not yield as accurate data as an interview – questions can limit range of answers and there are no additional cues, eg body language, participants might be less honest on a questionnaire than in a face-to-face interview.

Marks can be awarded for any appropriate advantages / disadvantages.

(f) **AO2 / 3 = 5**

Candidates should demonstrate understanding of some of the requirements of a good consent form. For full marks, it should be succinct, clear and informative.

It is likely to include some of the following information: treatment programme that is noninvasive; requirement to be assessed on current level of functioning; use of a trained therapist to conduct interviews; duration of the programme; requirement for re-assessment at the end of the programme; random allocation to a treatment or no-treatment group.

It should show awareness of ethical considerations, eg

- no pressure to consent – it will not affect any other aspects of their treatment if they choose not to take part
- they can withdraw at any time
- they can withdraw their data from the study
- their data will be kept confidential and anonymous
- they should feel free to ask the researcher any questions at any time
- they will receive a full debrief at the end of the programme.

For full marks, candidates must include a range of both procedural and ethical points.

AO2 / 3 Mark Bands (5 marks)
5 marks Effective Consent form demonstrates sound knowledge and understanding of research ethics.
4 – 3 marks Reasonable Consent form demonstrates reasonable knowledge and understanding of research ethics.
2 marks Basic Consent form demonstrates basic, superficial knowledge and understanding of research ethics.
1 mark Rudimentary

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Consent form is rudimentary demonstrating very limited understanding of research ethics.
0 marks No creditworthy material is presented.

(g) **AO1 = 2, AO2 / 3 = 2**

AO1: One mark for brief description, eg 'consistency' and one further mark for elaboration. Reliability refers to consistency over time. If a test, questionnaire, etc, is reliable, people tend to score the same on the test if they take it again soon afterwards.

AO2 / 3: One mark for a very brief answer, eg 'do another test' or 'test them again' or 'use another interviewer to check'. Two marks for some elaboration.

Reliability could have been checked by administering a valid and reliable questionnaire to the participants as well as interviewing them and then comparing the scores on the two measures. If the interview score was reliable, there would be strong positive correlation between the scores.

The interviews could have been filmed and given to another trained therapist to assess. A strong correlation between the scores given by each therapist would demonstrate reliability.

(h) **AO2 / 3 = 10**

For full marks, the method section should be written clearly, succinctly and in such a way that the study would be replicable. It should be set out in a conventional reporting style, possibly under appropriate headings. Examiners should be mindful that there are now different, but equally acceptable reporting styles. For example, candidates should not be penalised for writing in the first person. The important factor here is whether the study could be replicated.

There should be reasonable detail with regard to:

- design
- participants
- materials
- procedures.

AO2 / 3 Mark Bands (10 marks)
10 – 9 marks Effective Effective method section that demonstrates sound knowledge and understanding of investigation design. The design decisions are appropriate and the description provides accurate detail of the design, participants, materials and procedure of the study. Effective and appropriate report style.
8 – 6 marks Reasonable The method section demonstrates reasonable knowledge and understanding of investigation design. The design decisions are generally appropriate and the description provides reasonable detail of the design, participants, materials and procedure of the study.

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Generally appropriate report style.
5 – 3 marks Basic The method section demonstrates basic knowledge and understanding of investigation design. Some aspects of the design are appropriate. The description provides basic detail of some features of the study or rudimentary outline of the main features. Expression lacks clarity.
2 – 1 mark Rudimentary The method section demonstrates rudimentary knowledge or understanding of research. The report is weak, muddled or incomplete. Deficiency in expression results in confusion and ambiguity.
0 marks No creditworthy material is presented.

Q23.

AO3 = 3

Simply identifying or naming one or more potentially relevant ways of dealing with the ethical issue – maximum 1 mark. For example, confidentiality, anonymity, debrief. Further marks for explaining how psychologists could deal with this ethical issue.

For example:

Right to withdraw (1 mark)
Participants should be reminded of their right to withdraw from the research (2 marks)
If participants are showing signs of distress, the psychologist should remind the participants of their right to withdraw (3 marks).

Q1.

Part (a) was generally answered very well and most students were able to explain why matching the students was important. However, some failed to apply their response to this specific situation as thus were limited to 1 mark.

In part (b) many students were able to identify an appropriate variable to match the students on and then go onto explain how this might affect satisfaction scores. There were many possible accurate responses with the most common being how difficult they may find the topic (often linked to IQ) and prior knowledge of business studies. A significant minority of students identified an appropriate variable but then failed to apply it to this situation and explain how it may have affected satisfaction scores. There was also a significant number of students who failed to engage with the question and simply suggested one of a number of generic variables such as IQ, gender or age. Unless these variables were clearly linked to an appropriate variable (such as linking age to interest/experience of using computers) they would not be appropriate variables to match students on in this study and thus would not receive credit. It is important to remind students to engage with the question posed and tailor their answer to that specific question not to simply produce a response of non-specific rote-learned material.

In part (c) it was clear from student responses that the vast majority of students appeared to have some understanding of the process of random allocation. However, fewer students seem to clearly understand the reasons why random allocation is used and thus failed to answer the question posed. Of those students who did answer the question correctly some failed to apply it to this situation and thus were limited to 1 mark. It is important to note that simply referring to removal of bias without any outline or application is not sufficient to gain any credit. Reference to bias needed to be clearly focused on either removal of researcher bias or removal of participant bias and should be outlined and applied for full credit.

In part (d) most students clearly understood the strengths of stratified sampling and / or the weaknesses of opportunity sampling. However, many failed to tailor this knowledge to the actual question posed and did not explain why stratified sampling might be better than opportunity sampling in this study. Most students produced limited responses where they simply explained the strengths of stratified sampling or the weaknesses of opportunity sampling. Some students did explain why stratified sampling was an improvement in general but failed to apply their reasoning to this specific design. Equally there were many responses which had implicit explanation of improvements which was not clear and so not sufficient for full marks. A significant minority of students either produced responses which had no relevant content or did not attempt the question suggesting that some students did not have the knowledge to enable them to answer this question. There was also some confusion with systematic sampling. This is particularly disappointing considering there was a similar question on the previous examination paper in the June 2017 series which also asked about how stratified sampling could be an improvement (although in comparison to volunteer sampling). It is important to remind students that just because a topic appears on an exam in one series does not mean that the same topic cannot appear on the exam in the following series. It is also important to use previous examination questions with students to ensure they are familiar with the style and type of questions which they may be presented with in their actual examination.

In part (e) the overwhelming majority of students answered correctly and there was a wide range of appropriate questions which would generate qualitative data seen in student responses. Unfortunately, a very small minority of students wrote Likert scale questions which would have generated quantitative data.

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In part (f) there were some excellent responses with a range of different appropriate problems with analysing qualitative data seen. Most students who identified an appropriate problem went on to clearly explain it and thus gain full credit. However, some students failed to address the actual question posed and explained problems either with collecting qualitative data (such as ‘it takes time for participants to complete’) or with the validity of the qualitative data (such as ‘participants might lie in their responses’). Responses must be based on analysis to gain credit and the most common error seen was where students were focusing on subjectivity of the participants when answering the questions to produce the qualitative data rather than subjectivity of the researcher when analysing the qualitative data.

In part (g) most students answered correctly and a wide range of outlined ethical issues was seen in responses. Unfortunately, a few students simply named an ethical issue without outlining it.

In part (h) most students were able to draw an accurate scattergram with two appropriately labelled axes on suitable scales. A small minority of these students also produced an accurate and appropriate title which referred to the relationship between the two co-variables. However, many students failed to either provide a title for their graph or produced an inaccurate or vague title which was not sufficient for credit. There were also errors in plotting points in some responses and some students produced very small graphs with inappropriate scaling. Some students failed to read the question correctly and did not draw a scattergram. A variety of incorrect types of graph were seen but the most common was a line graph where students had joined up the plotted points ethical issue without outlining it.

The vast majority of students scored one mark in part (i) as few responses had both components required for two marks. Most responses only included a description of the relationship between online hours and satisfaction but did not identify the relationship as a negative correlation. The description of the relationship was expressed in several different accurate ways but the most common was more online hours the less satisfied they were. A small number of students produced confused conclusions based on causal relationships which were incorrect.

Part (j) was answered very well with the vast majority of students correctly calculating both the mode and median satisfaction scores and thus being awarded full marks. A very small minority made a mistake in their calculations leading them to produce an incorrect median and/or mode. Unfortunately, a very small number of students failed to fully answer the actual question posed and calculated a mean value instead of either the median or mode.

In part (k) there was evidently much confusion amongst students as to why the median would be more representative than the mode in this data set. Most responses simply consisted of statements of how to calculate the median and the mode rather than explaining a reason why the median might be more suitable to represent the average score in this study. Some students were able to explain why the mode was less representative of the average satisfaction scores and thus produced a limited explanation but very few were able to explain why the median was more representative. Only a very small minority of students were able to explain that the median was more representative as it is numerically closer to more of the other scores in the data set compared to the mode and thus few students gained 2 marks. Some students simply repeated the question stating that the median is more representative than the mode without any explanation.

There were a lot of correct answers to part (l) and it was apparent that many students had the knowledge to be able to identify the negative skew in this data. However, when compared to the other MCQ on this paper, more students did not attempt this question and the number of correct responses was lower. This suggests that their knowledge of negative skew was poorer than their knowledge of introspection and overt observations.

Q2.

Part (a) was generally quite poorly answered. Although many students could gain some credit for providing detail from the study and / or giving ethical issues, few were able to demonstrate sound understanding of the requirements of a practical consent form with many not referring to consent at all. Ethical issues were generally covered reasonably well and were the strongest of the three elements, whilst format / style was the weakest and was often inappropriate (eg 'You will', or 'You must', or 'You have taken part'). Although there were some excellent responses, generally it appeared that the students had not really thought about the nature of giving informed consent, with sparse experimental detail and the incorrect tone used, often reading more like a brief / debrief from or a legal disclaimer. This is perhaps an area that schools / colleges could look at in more detail.

In part (b) despite many students showing an understanding of directional hypothesis, just less than half failed to achieve any marks, mainly due to a focus on horror films leading to more nightmares with no reference to the romantic comedy condition. Additionally, many students failed to fully operationalise the variables and some struggled to write an appropriate hypothesis for a repeated measures design, employing a writing frame for an independent measures design.

In part (c) most students identified individual differences as a reason to use a repeated measures design but only about half of these students managed to clearly link their reason to the experiment. Surprisingly, there was some confusion over the term 'repeated measures', with some students focussing their answers on reliability and others on order effects. Responses to this question again suggest that students need to gain more practical experience of designing and conducting experiments as part of their course, rather than focussing on theoretical learning of these concepts.

Part (d) offered a great opportunity to distinguish genuine understanding of reasoning behind the use of counterbalancing as opposed to whether students had merely rote learned what it is and why it is used. Overall, there appeared very little understanding with approximately half of students failing to achieve any marks and approximately one tenth of students accessing both marks. Most students achieving marks identified the issue of order effects but application to the experiment was limited, with many rote learned, inappropriate responses such as boredom / tiredness given rather than engaging with this study.

Part (e) was generally well answered with over half of the students accessing all 3 marks. Generally, answers referring to a hat / container were more successful than those involving a random number generator / computer, as these responses often failed to fully describe the process.

Overall, students were able to answer part (f) well, although understanding of mean scores was generally better than standard deviation. It appeared that students often understood the data but failed to appropriately justify their suggestions, often simply restating information given in the table. There were also a few costly examples of justifications given without suggestions.

Part (g) was a good differentiator, with some excellent responses by students who clearly explained what 'significant at $p<0.05$' meant and successfully managed to do so in the context of the experiment. Weaker students generally gave a rote learned reason for why psychologists generally use the 5% level or failed to contextualise their response. Unfortunately, many students failed to explain that the '<0.05' sign meant less than 5%. Teachers should ensure that students are familiar with the mathematical symbols required by the new specification.

Part (h) was generally not well answered. A huge range of modifications to the design of the experiment were given but unfortunately a lot of these were inappropriate, such as

‘use a control group’, ‘use a blind procedure’, ‘use a repeated measures design’ or ‘use an independent measures design’, suggesting either a lack of understanding of the reasoning for experimental design or a failure to recall the experimental protocol. Some students suggested using a matched pairs design and went on to explain effectively how this could improve validity by reducing the likelihood of participants guessing the aim of the study which would reduce demand characteristics. More commonly students justified the modified design by inappropriately suggesting that it would avoid individual differences. Changing the sample was a common answer but it was often not clear how this would improve validity, with few being able to give more than a generic explanation. Stronger responses generally focussed on the problem of using a text message to ascertain whether a nightmare had been experienced, suggesting a questionnaire/interview to reduce the chances of participants lying or to help distinguish nightmares from unpleasant dreams.

Q3.

It was quite clear from many of the weaker answers that students did not understand the meaning of ‘implications’. As a result, many responses focussed on issues rather than implications, and consequently some answers scored no marks. Fortunately for many students, some issues-based answers happened to gain marks incidentally where they came to recount examples of instances of ‘harm to participants’, which could legitimately be seen as an implication of the research for the participants. Such cases usually arose in the context of studies of social influence. Better answers covered wide-ranging issues of the type seen in the mark scheme and made good use of such diverse topics as IQ testing, defining abnormality, Bowlby’s influence on attitudes to child-rearing and gender research. Any psychological topic was valid. Some answers were excessively long, possibly because students had prepared for a 16-mark question on this area.

Q4.

Marks were awarded independently for part (a) so many answers gained a mark for identification of strata. Whilst the stem was meant to cue the students in to ‘the 4 schools’ as strata, some students invented possible strata of their own, for example, male / female or A Level subjects studied. Thereafter, marks were less easily gained because further credit was dependent on whether or not students could explain the need for proportionality in the sample. References to proportionality were not always explicit; other terms could receive credit, for example, many students used the word ‘ratio’ which was accepted. It was also acceptable and quite commonly the case that the idea was explained through the use of a concrete example, or via a mathematical formula. Having achieved marks for strata and proportionality, it was then possible to be credited for the random selection from each stratum. Relatively few answers did attain full marks.

Part (b) tended to yield high marks, with confidentiality, withdrawal of data, enquiries about possible harm and explanation of the aim as the basis of most answers. Verbatim responses tended to gain the higher marks, usually because they included fairly elaborate explanation as would typically occur when dealing with real participants. Some answers strayed into reasons why certain points would be important, which was not really answering the question. Despite taking a fairly eclectic approach to what might be construed as ‘ethical’, examiners occasionally noted points of general small talk that were not deemed creditworthy, such as ‘Have you travelled far?’

Performance on part (c) depended on whether or not students were able to organise their response efficiently and address the three skills in a relatively short time. Less well scoring answers got bogged down in theory of maternal deprivation and barely mentioned parasocial relationships, or wasted time explaining the three different levels or types of parasocial relationship and forgot to mention attachment theory. There was some confusion with the absorption-addiction model. Effective discussion tended to centre

around use of evidence or the possible benefits of parasocial relationships, but was not very common. Students sometimes wasted valuable time on anecdotal account of the effects of the death of famous people.

Q5.

In part (a) marks were awarded independently so many answers gained a mark for identification of strata. Whilst the stem was meant to cue the students in to ‘the 4 schools’ as strata, some students invented possible strata of their own, for example male / female or A Level subjects studied. Thereafter, marks were less easily gained because further credit was dependent on whether or not students could explain the need for proportionality in the sample. References to proportionality were not always explicit; other terms could receive credit, for example, many students used the word ‘ratio’ which was accepted. It was also acceptable and quite commonly the case that the idea was explained through the use of a concrete example, or via a mathematical formula. Having achieved marks for strata and proportionality, it was then possible to be credited for the random selection from each stratum. Relatively few answers did attain full marks.

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In (c), marks were largely dependent on the ability to organise material and address the three skills in limited time. Despite the diverse requirements, answers tended to be high scoring with many accurate and through accounts of Bem’s work, including the BSRI and more general theory. Whilst most students offered some valid application, it was surprisingly rare to see effective links to self-esteem. Discussions varied both in terms of content and quality, with many of the better answers commenting on relevance in relation to social changes since Bem’s original work.

Q6.

In part (a) marks were awarded independently so many answers gained a mark for identification of strata. Whilst the stem was meant to cue the students in to ‘the 4 schools’ as strata, some students invented possible strata of their own, for example male / female or A Level subjects studied. Thereafter, marks were less easily gained because further credit was dependent on whether or not students could explain the need for proportionality in the sample. References to proportionality were not always explicit; other terms could receive credit, for example, many students used the word ‘ratio’ which was accepted. It was also acceptable and quite commonly the case that the idea was explained through the use of a concrete example, or via a mathematical formula. Having achieved marks for strata and proportionality, it was then possible to be credited for the random selection from each stratum. Relatively few answers did attain full marks.

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Part (c) was often well answered, but, as in the case of the parallel questions, marks were largely dependent on the ability to organise material and address the three skills in limited time. What might have been very worthy accounts of Vygotsky's theory were sometimes marred by students' lack of ability to use specialist terminology effectively. Discussion tended to focus on implications for education and comparisons with Piaget. Despite there being ample scope for application, this was often very limited, with the barest mention that 'students who say they are helped in the classroom would learn better'.

Q7.

(a) This is an example of a question where students could benefit from developing their ability to "use knowledge of research". It appears to be an area in which they struggle. Using their knowledge requires them to select appropriate studies and/or theories to explain what is going on in the scenario. Some students simply described, in great detail, relevant studies or theories, but without any reference to either Zina or Amanda. Other students described what was going on in the scenario, almost re-writing it, but without any reference to relevant research. For example, Zina was near to the attacker and so was very anxious, more so than Amanda who was further away and so was less anxious. Neither of these strategies gained credit. Better responses referred to relevant research and then applied it to the scenario, such as Zina may have experienced the weapons effect and so would be less likely to recall the attacker. Or Yuille and Cutshall showed that those who were closer to the event were more accurate in their recall, so Zina may remember more than Amanda.

(b) Nearly all students did well on this question (over 80% scored full marks), covering a range of ethical issues that should be considered. Most referred to the fact that by interviewing the girls, it may bring up painful memories, so protection from harm is an issue.

Q8.

(a) For full credit students needed to apply their knowledge of a problem associated with volunteers in this particular study. Many only referred to bias or representativeness and did not relate their responses to type of offender/ possible effect on therapy or on anger scores.

(b) There were many different suggestions given for random allocation and all suggestions that were practical and would result in the required groups were credited. However, many responses never went beyond the idea of putting names in a hat or into a random number generator, meaning that all the researcher would have is names in a hat or in a generator. Students should be able to describe accurately what they would do to reach the final stage of having the required number of people in the required groups. It was very clear that many students had no idea of what they would have to instruct the computer or random number generator to do in order to reach this stage.

(c) Full marks were rarely achieved as most responses failed to show understanding of what was being measured in this study (the DV) which was a **reduction** in anger scores not anger scores or anger. Some students thought the study was looking for a difference between the start and end of therapy rather than between two different therapies.

(d) Many students failed to write enough about the data. Instead, they seemed to be providing answers to a question that required justification of one chosen suggestion, often just referring to the greater reduction in Group 2/Therapy B indicating that it was more effective. There were many points that could have been extrapolated from

the data in the figure.

(e) Many students overlooked the most significant improvement to be derived from using a matched pairs design, ie the matching on pre-therapy anger scores. These students resorted to explaining matched pairs in a generic way without reference to the criteria which could be used for matching. Instead they often suggested IQ, age and sex as the crucial points, rather than pre-therapy anger scores. While credit was available for demonstrating an understanding of matched pairs design these responses did have to be contextualised and unfortunately many answers were generic.

(f) It was surprising that a number of students missed the second part of this question. An appropriate ethical issue was outlined (often fully) but then there was a failure to explain how this issue could have been dealt with. The importance of keeping the whole question in mind is highlighted in this case. Some responses presented a muddle of possible issues and markers had to try to match an appropriate issue with its appropriate solution. More worrying were the responses where one issue was described and a different issue was dealt with.

(g) Answers were often disappointing as students seemed unaware that median values are a form of average and stated that a problem was the median is not an average. Others made vague statements about how the median doesn't use all the values, but it would be difficult to find a median without the other values.

(h) This was generally answered well by the majority of students. However, there were quite a number of responses where knowledge was evident but marks were not obtained because the answer was not contextualised.

(i) It was again difficult to give full credit to responses in some cases as they were often vague or undeveloped so the information about the strength of using questionnaires as a technique for data collection often lacked clarity.

Q13.

(a) Some students clearly understood what behavioural categories are while others had no idea. A number of students were unable to suggest operationalised behaviour categories. Kicking and swearing would be suitable, physical and verbal aggression would be unsuitable. Given the material in the stem, just suggesting children would be observed in the playground, with no further elaboration did not attract credit. A few students did not take account of the stem material and suggested how children could be observed in the home at the age of two.

(b) Most students could identify an ethical issue but some chose issues that were difficult to apply to this scenario. Many ethical issues could be made relevant; the need for informed consent and the need for confidentiality were apt. The effectiveness of the elaboration distinguished between students' marks. Students who chose to write about protection from harm needed to make an appropriate case for this.

(c) Students who responded to this question in the context of the stem material were able to contextualise the comparison between interviews and questionnaires and that helped in producing an appropriate answer. A number of students produced good answers referring to the interviewer's opportunity to clarify questions and answers and the benefits that might accrue from being face to face with the parents. Students needed to explain why parents might be more likely to lie in a questionnaire or in an interview, since a case could be made for either. Some students who did not read the question carefully wrote

about the advantages of questionnaires. A few students thought the children, rather than the parents were being interviewed.

Q14.

Most students could identify volunteer / self-selected sampling. A few responses incorrectly referred to opportunity or random sampling.

Many responses scored the full two marks. Perhaps this was partly due to the fact that the mark was given whether or not the DV was operationalised. Some students had no idea what IV or DV referred to, and a significant minority got them the wrong way round.

Good answers often referred to the diminished likelihood of demand characteristics with independent groups design, or the lack of order effects due to participants taking part in only one condition. A few answers incorrectly muddled the two, ie there would be fewer demand characteristics because participants would not suffer practice effects. Although it was correct to say there would be no order effects, it was not correct to say there would be no demand characteristics. There could potentially be fewer.

Generally students noticed that the stem gave the opportunity to refer to the potential for informed consent, though many had not addressed the right to withdraw. However, some students ignored the requirement to focus their response on the stage of recruiting participants, so answers referring to debriefing were not relevant. The word debriefing was inappropriately used when some students were referring to briefing.

Q15.

(a) Students who scored well often focussed on the anonymity of questionnaires, the lack of investigator effects or the time advantage where questionnaires could be simultaneously completed. Whether students gained full marks depended on how effectively they were able to explain the advantage they had identified. Better answers compared questionnaires to interviews, or referred to the relatively large number of adults in this study. Some students referred to the advantages of analysing data from questionnaires which was not the focus of the question.

(b) Most responses explained the term qualitative data appropriately. A few students described quantitative data; given that the word quantitative can be so easily aligned with number, it is surprising that students get muddled about these terms.

(c) Most responses were appropriate, although a number of questions provided would have produced numerical data (eg how long ?x2, how many ?x2) or categorical answers (usually yes / no responses).

(d) Although most students had no difficulty in identifying two ethical issues, many students were less successful in providing suitable suggestions for how one of these issues could be dealt with. Some students just re-stated the ethical issue. Other students filled up the answer space by explaining how both ethical issues could be dealt with, leaving the examiner to decide which was the more credit-worthy answer.

Q16.

(a) The majority of students scored full marks for this question although weaker responses merely re-stated the pattern of the results given in Table 1 and omitted any reference to an appropriate conclusion.

(b) Answers to this question were relatively poor, with only a third of the cohort able to state the independent and dependent variables with clarity.

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(c) This was very poorly answered with more than half of the responses achieving no credit. Students muddled stratified sampling with both random sampling and systematic sampling. Very few could explain in a logical way exactly what a researcher would do to gain a stratified sample of the available target population.

(d) (i) Although some students seemed aware that once selected the participants could be randomly allocated to conditions using a hat or computer, they were very unclear about exactly what should be done. Descriptions suggested 'putting all the names in a hat/computer' but could not describe what would happen next. It seemed quite obvious to examiners that many students have never had a practical opportunity to allocate either people to conditions or words to lists, in a random way.

(ii) Similarly, few students gained full credit for this question as they struggled to explain why random allocation is important, although many were able to produce answers with vague reference to the issue of bias.

(e) Students have clearly learned generic responses to questions about the advantages and disadvantages of experimental designs. However, here they needed to make it clear that repeated measures would not be a suitable experimental design in this case. Some did not notice that having guessed the weight of a cake once, participants would lose their naivety in the study and it would be an illogical request to ask them to repeat the task either with, or without, other estimates on the answer sheet. In many cases they just trotted out answers which suggested the participants would be extremely fatigued having guessed once or that they would get better at guessing so their answers would improve.

(f) There seemed to be an expectation that as the question asked about ethical issues then the response should include how to address the issue. The question did not require students to do this but many offered such answers. Some stated that informed consent was an issue but then explained the issue of consent/permission to participate in the study, without realising these are different issues. Others identified informed consent but failed to recognise that attempting to gain this would mean it would be impossible to implement the study.

(g) (i) Although the Specification only names structured and unstructured interviews as types of interview, there were some very obscure answers to this question. Unfortunately, even when students chose to write about the named interviews they often drifted into answers about type of question. Some thought that structured interviews only contain closed questions and unstructured only open questions and elaborated their description in this way. They then compounded this error in part (g)(ii) by discussing a limitation of closed or open questions. Others suggested that one type of interview would be a questionnaire.

(ii) As stated above, many students discussed limitations of types of question rather than types of interview and only about a third of the cohort gained full credit for this question.

Q17.

(a) There were many appropriate suggestions for maintaining confidentiality, such as using pseudonyms, avoiding using photographs and avoiding identifying the location of the case study participant and / or family. A few candidates did not seem to understand the term confidentiality as some answers were based on other ethical issues eg protection of participants from harm.

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(b) Most techniques identified were appropriate and there was some thoughtful elaboration related to the case study. Answers referring to the use of meta-analysis were not appropriate.

(c) Many candidates scored at least two marks, usually by focusing on the uniqueness of a case study and the limited possibility for generalisation. A few candidates could elaborate on this whilst others considered a second factor such as the difficulty of verifying evidence from the past. Answers focusing on limitations due to the time involved in longitudinal research were not credited as many case studies are not longitudinal.

Q18.

(a) Many candidates showed some understanding of a natural experiment but a substantial number confused it with studies in a natural environment.

(b) Most answers were credit-worthy although some merely named rather than outlined a method. The best responses suggested a way which involved both observation and recording of the behaviour. Few candidates suggested the use of interviews or questionnaires, although these were credit-worthy.

(c) This question was usually well answered and there were very thoughtful responses, for example, where candidates suggested that consent from the children as well as informed consent from parents would be appropriate, given the age of the children. It is encouraging to see that candidates are able to give consideration to ethical issues. However, worryingly, a few did not seem to be aware of what ethical issues are.

Q19.

In general candidates were able to do well on this question.

Q20.

(a) Most candidates understood that this was a volunteer / self-selected sample and many of these went on to explain a relevant weakness. The most commonly offered was the problem of generalising from a self-selected sample. Some candidates lost a mark by confusing a volunteer sample with an opportunity or random sample. However, they could still gain marks by explaining an appropriate weakness. A surprising number of candidates did not understand what was meant by a sample and identified the method (questionnaire) instead. Unfortunately, this meant that they usually got no marks at all.

(b) This was generally answered well with the most successful answers focusing on issues of confidentiality and protection of harm. There were some very thoughtful responses and it was pleasing to see that some candidates could respond by giving serious consideration to ethical issues. Informed consent was a perfectly acceptable issue but candidates who used this often offered a weak way of dealing with it eg ‘informed consent was an issue so the researchers would have had to ask them to give their consent’. A surprising number of candidates did not seem to understand what was meant by an ethical issue and wrote about problems of sampling instead.

Q21.

(a) Most answers scored two marks. Very few candidates failed to score at least one mark.

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(b) Candidates generally either answered the question effectively, relating the multi-store model to the stem about Peter, or they failed completely to apply their knowledge as required. Concise, apposite answers scored full marks.

(c) There were many appropriate and clear answers but also some which identified one issue but then described how a different issue could be dealt with. Some candidates failed to clearly state the issue merely saying how an unnamed issue could be dealt with. Also, identifying 'withdrawal from the study' as the issue and then saying 'Peter should be told he could withdraw from the study' as a way of dealing with the issue, is not going to gain more than minimal credit.

A few candidates offered problems of methodology rather than ethics.

Q22.

Perhaps surprisingly, many candidates achieved higher marks for this section than for their other two questions. Most candidates attempted all parts of the question although a significant minority did not complete part (h) suggesting that they might have run out of time. This was a pity since this part carried 10 marks.

(a) This was a straightforward question and many candidates accessed full marks but a surprising number were confused by median and range and some did not understand what the range indicated about the data.

(b) Many candidates were very well prepared and got full marks here but some wrote very confused answers showing little understanding eg 'Spearman's Rho because it was nominal data and repeated measures'.

(c) There was a centre effect here. Some candidates had a good understanding of Type 1 error while others had clearly never heard of it. Some understood what is meant by the term and offered a definition but were not able to apply their knowledge to answer the question.

(d) Candidates offered a wide range of answers, although some were a little bit too brief or poorly explained to get both marks. There was some confusion about what is meant by a placebo and some candidates offered two explanations which were essentially the same as one another. Other candidates offered factors which could apply equally to the treatment and non-treatment group. It is important in this kind of question to read the stem carefully. Some candidates said that the therapists might have been biased in favour of the treatment group, but the stem clearly states that the therapist did not know who had been in which group.

(e) A lot of candidates missed the point that the advantage / disadvantage needed to be in comparison to interviews. Many candidates gave advantages/disadvantages that could apply equally well to both self-reports and interviews. This was acceptable only if the candidate made it clear ie '*People are less honest in a questionnaire*' was not credit-worthy because it could apply to both interviews and questionnaires. However, '*People are less honest in a questionnaire because they are anonymous and feel they can lie about themselves without being found out*. *In an interview where they are face-to-face with the interviewer, they might find it more difficult to lie*'.

(f) Some candidates wrote excellent consent forms containing both ethical and procedural information and expressed them in appropriate language. Some candidates had a very vague understanding of what needed to be included here, either only focusing on all the ethical issues (*you will have the right to withdraw your data, yourself etc*) with no mention of the procedures, or vice versa. Many adopted a

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rather inappropriate tone eg '*Once you have signed this form, you are committed to being in the study' or 'You have to subject yourself to an interview*'. It was surprising to see that a few candidates seemed to think a consent form acted as some kind of legal disclaimer – '*you may suffer harm but if you sign this you can't sue us.*'

It was notable on this question that candidates who were able to express themselves clearly and succinctly were much more likely to access full marks. Many answers were so poorly constructed that the content was difficult to understand. Many switched confusingly between pronouns eg *They will have to have an interview. You can withdraw at any time. I agree to be part of this study*.

(g) There were some very muddled answers to this question. Candidates often didn't read the question carefully, and wrote something like '*Reliability means if you do the study again you will get similar results*' for their definition and then didn't know what to write for the next part of the question. Those candidates who explained it in terms of inter-rater reliability generally gained full marks. Some candidates did not read the question carefully and did not relate their answer to checking the scores in this particular study. Many candidates thought incorrectly that test-retest involved using different participants. Some candidates suggested split-half methods indicating a lack of thought about the question. Some candidates confused reliability with validity.

(h) Many candidates showed limited awareness of a conventional reporting style. While it was not necessary to divide the method section into sub-sections, this strategy might have helped candidates to include all the relevant details. Weaker answers made no mention of gender or eating disorders and simply repeated details from the stimulus material. Many candidates completely lost sight of the fact that gender differences were being investigated and suggested randomly allocating participants to groups. A lot of time was wasted in including aims / hypotheses and statistical analyses which do not form part of a method section. Better answers included appropriate detail of IV, DV, design, sampling method, materials / equipment and procedure which would have enabled replication to take place. As in (f), poor expression and grammatical errors often obscured meaning.

Q23.

Some candidates tackled this question well and were able to offer sensible suggestions for protecting research participants from harm. Weaker answers were very brief, eg 'confidentiality', 'debrief them', etc without making it clear how this strategy would protect the participant from harm.

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