

Examiners' Report

June 2023

GCE Psychology 9PS0 03

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Introduction

The 2023 examination was the second full exam series since the pandemic, COVID-19. No advance information was provided to candidates for 9PS0 03 and therefore the series is perceived as a step back to pre-pandemic examination conditions. The performance of the candidates in this examination is summarised below, with advice on how to improve in future series.

In Section A, the best responses gave contextualised responses that were all specific to the novel scenario provided in the question. Where a question asked for 'one' strength/weakness/improvement for two marks, candidates provided full justification of their relevant identified point in relation to the study. Weaker responses were not fully justified or were purely generic, so this remains a focus for centres to support candidates in future series.

For Section B, the best responses focussed on considering relevant and appropriate points related to the unseen study (Question (Q)03) and on the required imbalance for the essay (Q04). Points were accurate and, in the context of the question, focussed on producing relevant and appropriate material, showing clear understanding of what they were asked in the questions.

Centres may want to support some candidates on the practical applications of a study (Q03a) and again on the use of research evidence to support or refute application to the unseen study (Q03b).

Centres may also want to help reinforce the imbalance towards Assessment Objective (AO)3 for the essay (Q04) and how there is only a limited amount of AO1 that can be credited. An appropriate allocation of time needs to be offered to the AO1 and AO3 elements of the essay to achieve the most marks possible in the time allowed.

In relation to Section C, the best responses considered the balance (Q05) or imbalance (Q06) required for the command words and question types used. Knowledge and understanding (AO1) was relevant, accurate and thorough, with varied ideas used as appropriate. Evaluation, analysis and assessment (AO3) was well-developed and led to appropriate judgements and conclusions throughout their response.

Centres may want to ensure that candidates are using appropriate, accurate information regarding ethics because weaker responses had numerous inaccuracies and misconceptions regarding ethical issues for both humans and animals.

Centres may also want to reinforce time allocations so that candidates are spending the requisite time on Q05, to give them the best opportunity to gain the most credit for their work.

The remainder of this Examiner Report will focus on each individual question and specific examples of candidate responses, which can be used to help prepare candidates for future 9PS0/03 examinations.

Question 1 (a)

For Q01(a), candidates were required to identify the dependent variable (DV) in the study. The best responses identified the dependent variable, with weaker responses focussing on the duration of eye contact or the video clips.

1 Eye contact study

Eye contact could be used as a non-verbal cue to help interpret an individual's behaviour. A longing gaze could be considered as liking someone, but too long a gaze could lead to discomfort. If the eye contact is too brief, there could also be feelings of discomfort due to suspicions about the individual's motives.

Researchers therefore wanted to investigate the length of time that people consider eye contact to be the most comfortable. They recruited 515 visitors to a Science Museum from 56 nations who had an age range of 11–79 years old, with 240 male and 275 female participants.

The researchers asked participants to watch a series of video clips of an actor making eye contact with them for various durations, ranging from 0.1 seconds to 10 seconds. Throughout the course of the study, the researchers used eight different actors, who were all white British, with half of them male and half female. Each participant only saw a single actor who was the same sex as themselves. After watching each video clip, the participant had to say if the duration of eye contact made them feel comfortable.

(Source: adapted from Binetti et al. (2016))

(a) Identify the dependent variable (DV) in the eye contact study.

(1)

said
whether the participant ~~took~~ the duration of eye contact ~~the~~
made them feel comfortable or uncomfortable.



One mark is given for identification of the DV.

Total: 1 mark

Question 1 (b)

Q01(b) required candidates to identify a conclusion that could be made from Table 1 and then justify their conclusion using the data.

The best responses identified a conclusion, which was most frequently regarding both males and females feeling most comfortable at 3 seconds duration, and then supported this using data as appropriate.

Weaker responses did not offer a conclusion or focus, or gave an inappropriate conclusion from the data.

The data was collected by the researchers and the results are shown in Table 1.

	Duration of eye contact from the actor						
	0.1 seconds	0.5 seconds	1 second	3 seconds	5 seconds	7 seconds	10 seconds
Number of males that felt comfortable (N = 240)	0	50	100	220	180	65	0
Number of females that felt comfortable (N = 275)	0	60	120	258	220	77	0

Table 1

(b) Explain **one** conclusion you can make using the data in Table 1.

(2)

females and males feel the most comfortable with 3 seconds of eye contact. This is shown by 258/275 females and 220/240 males stating that they felt the most comfortable with 3 seconds of eye contact, these numbers being the highest numbers.



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Examiner Comments

This response is given both marks, for:

- identification of a conclusion (1)
- justification of the conclusion (1)

Total: 2 marks

Question 1 (c)

Candidates were required to draw a bar chart for Q01c, including an appropriate title and axes labels.

The best responses were able to construct an appropriate bar chart using full axes, labels, and a full title.

Weaker responses drew a different type of graph, did not separate the bars, plotted the data inaccurately, used an inaccurate scale or did not offer a full title or axes labels.

Usually, candidates gained two marks, generally for the title and the plotting of the data.

Table 2 shows the percentage (%) of males and females that felt comfortable with an eye contact duration of 5 seconds.

	Eye contact duration of 5 seconds
% of males that felt comfortable	75%
% of females that felt comfortable	80%

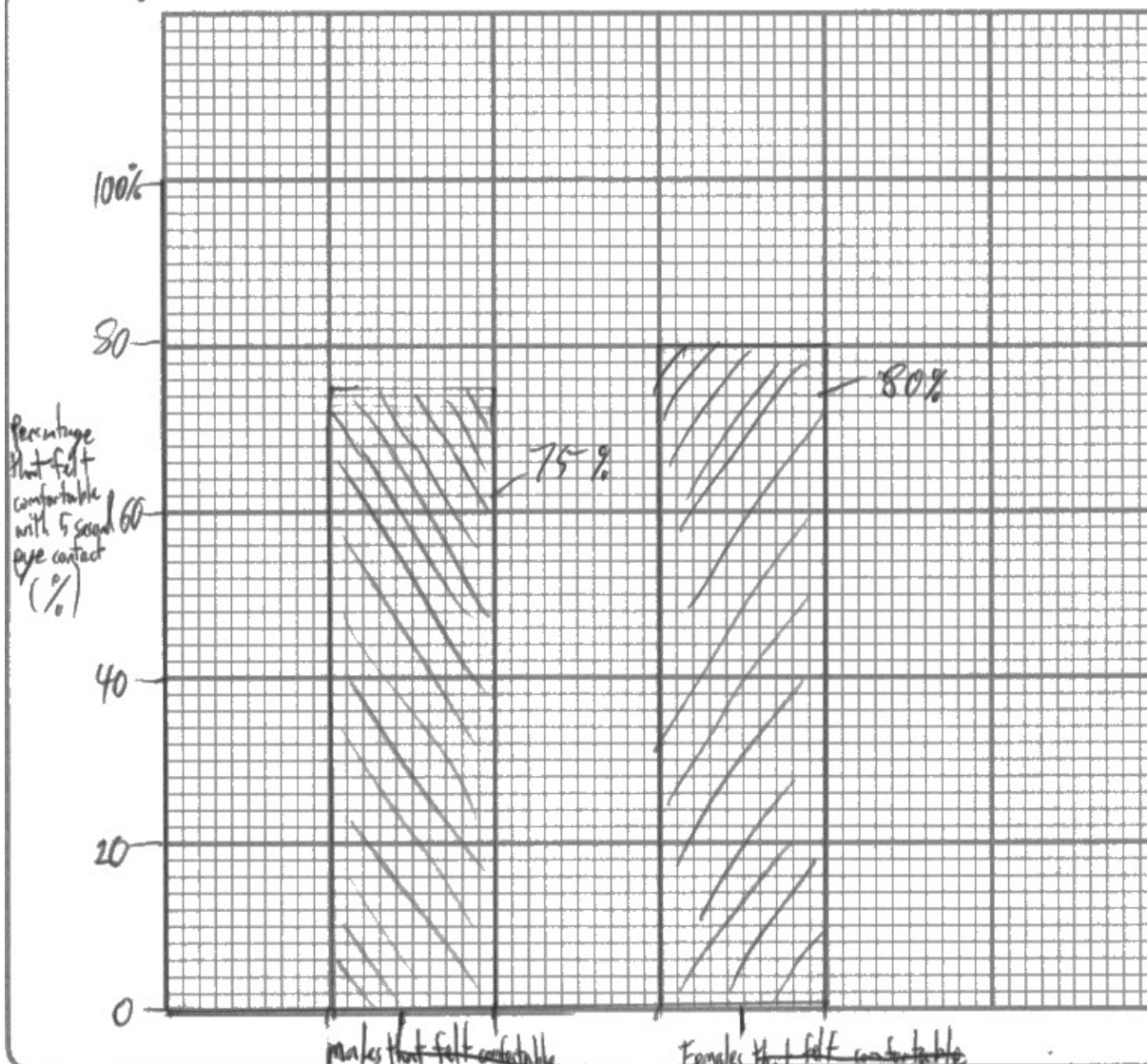
Table 2

- (c) Using the data in **Table 2**, draw a bar chart to represent the male and female data for eye contact with a duration of 5 seconds.

(3)

Title

Bar chart representing the percentage of males and females feeling comfortable with eye contact with a duration of 5 seconds.





This response is given full marks for the:

- correct/appropriate title (1)
- correct/appropriate labelling of axes (1)
- correct plots of data points (1)

Total: 3 marks

Question 1 (d)

For Q01(d), candidates were required to identify an appropriate improvement for the study and then fully justify this in context.

The best responses offered a relevant and appropriate improvement and then justified this fully in the context of the study. The most common improvements were using:

- real life actors
- actors of different sexes
- using actors from different countries

Weaker responses gave an inappropriate improvement.

- They focussed on a weakness of the study
- They gave a generic response
- Where an appropriate improvement was suggested, there was no relevant justification to support their improvement

(d) Explain **one** improvement that could have been made to the eye contact study.

(2)

One improvement could be that they should ^{also} allow participants to see an actor who was not the same sex as themselves. This is because a female participant may not have felt uncomfortable with another woman (due to women stereotypically being less dangerous/threatening) but may have felt significantly more uncomfortable with a man. ~~knows~~ This would be an improvement as it would increase the study's validity as we would know that feeling comfortable ^(or) was a direct result of the IV (eye contact) and not an extraneous variable (sex).



ResultsPlus
Examiner Comments

This response is given both marks, for:

- identification of an improvement in context (1)
- justification of the improvement (1)

Total: 2 marks

Question 2 (a)

Q02(a) required candidates to identify a strength and weakness of using opportunity sampling for the study and then fully justify these in context.

The best responses gave contextualised responses, clearly focussed on the sampling technique and fully justified their strength and weakness.

The most common strength was how opportunity sampling was more efficient and economical than other sampling methods.

The most common weakness was related to the technique lacking generalisability to the target population, due to the researcher selecting the participants themselves.

Weaker responses gave a strength or weakness of the study in general, a generic response, focussed on the wrong sampling technique, or where credit was awarded for identification of the strength or weakness, no relevant justification was offered.

- (a) The researchers in the helping behaviour study used opportunity sampling to recruit the participants for their study.

Explain **one** strength and **one** weakness of using opportunity sampling for the helping behaviour study.

(4)

Strength

A strength is that the study will be quick and easy to do as it involves the confederate picking participants who are there and available at the time, therefore no prior sample needs to be gained as they choose anyone coming out of a luxury shop or passers-by on the ordinary street.

Weakness

A weakness is that there could be a risk of investigator bias as the confederate has a choice of who they approach in either the prestigious area or the ordinary street. Therefore, this reduces ^{generalisability} ~~validity~~ as they could be similar individuals in terms of sex, age, so don't get varied data that can be applied to multiple groups.



This response is given full marks, for:

- identification of a strength in context (1)
- justification of the strength (1)
- identification of a weakness in context (1)
- justification of the weakness (1)

Total: 4 marks

Question 2 (b)

For Q02(b), candidates needed to identify an appropriate conclusion from Table 3 and then justify this fully, using the data.

The best responses:

- offered an appropriate conclusion
- most commonly focussed on older participants being more helpful
- supported this with data from the table

Weaker responses did not give a conclusion, gave an inappropriate conclusion or, where credit was awarded for a conclusion, the justification was missing or not creditworthy.

Table 3 shows the data collected by the confederates regarding the age of the participants for the helping behaviour study.

Estimated age of the participants	Did help the confederate	Did not help the confederate
20–35 years	51%	49%
36–50 years	62%	38%
56–70 years	68%	32%

Table 3

(b) Explain **one** conclusion you can make using the data in **Table 3**.

(2)

the older estimated age of the participants the more likely they were to help the confederate as 68% in the 56-70 years category helped compared to 51% in the 20-35 years category suggesting that older people are more likely to help someone in need and display helping behaviours.



ResultsPlus
Examiner Comments

This response receives both marks, for:

- identification of a conclusion (1)
- for justification of the conclusion (1)

Total: 2 marks

Question 2 (c)

Q02(c) required candidates to identify an appropriate conclusion from the table and justify this conclusion using the data.

The best responses offered an appropriate conclusion, most commonly focussed on those in luxury shops being less helpful, and then supported this with data from the table.

Weaker responses did not give a conclusion, gave an inappropriate conclusion or, where credit was awarded for a conclusion, the justification was missing or not creditworthy.

Table 4 shows the data collected regarding the participants' location.

	Did help the confederate	Did not help the confederate
Luxury shop (N = 40)	14	26
Ordinary street with no shops (N = 40)	31	9

Table 4

(c) Explain **one** conclusion you can make using the data in **Table 4**.

(2)

The data shows that 26 participants did not help the confederate outside of the luxury shop compared to 9 participants who did not help ^{on} outside the ordinary street. Therefore, you can conclude that there is more helping behaviour demonstrated on the ordinary street.



ResultsPlus
Examiner Comments

This response is given both marks, for:

- identification of a conclusion (1)
- justification of the conclusion (1)

Total: 2 marks

Question 2 (d)

Candidates were required to compare the observed/calculated value with the relevant critical value and then justify what this meant for the study, for Q02d.

The best responses compared the two values appropriately and then made an accurate judgement of significance in context, with regard to males and females.

Weaker responses either did not compare the values appropriately, did not make a justification of what it meant for the study or focussed on an inappropriate justification in terms of the location or age of participants, rather than their gender.

Table 5 shows the data collected regarding the participants' gender.

	Did help the confederate	Did not help the confederate
Male (N = 40)	20	20
Female (N = 40)	25	15

Table 5

- (d) The researchers in the helping behaviour study decided to carry out a chi-squared test on their data from **Table 5**. They found an observed/calculated value of 1.27 for a one-tailed (directional) test at the 5% level of significance when $df=1$.

Explain what this shows in terms of the helping behaviour of the participants in the study.

(2)

The calculated value of 1.27 is less than the critical value of 2.71 therefore there is no significant difference in helping behaviour between male and female participants in this study.



ResultsPlus
Examiner Comments

This response is given both marks, for:

- comparing the observed/calculated value with a relevant critical value (1)
- justification of what this means for the findings of the study (1)

Question 2 (e)

For Q02(e), candidates were required to state two appropriate reasons for the researchers using a chi-squared test for the data in Table 5.

The best responses gave two clear, appropriate reasons, whereas weaker responses offered inaccurate statements or suggestions that did not relate to the reasons for the researchers using the test for the data in Table 5.

(e) State **two** reasons why the researchers in the helping behaviour study used a chi-squared test to analyse their data in **Table 5**.

→ nominal, named

(2)

- 1 One reason a chi-squared test was used is because the data collected is nominal data - there is named categories - help the confederate or not.
- 2 Another reason is that this was an observation which also had an independent groups design each experimental condition was done by different participants.



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Examiner Comments

This response is given both marks, for:

- each appropriate statement (1)
- using the chi-squared test in the helping behaviour study for the data in Table 5 (1)

Total: 2 marks

Question 2 (f)

Q02(f) required candidates to identify a weakness of using quantitative data for the study and then fully justify the weakness given in context.

The best responses identified a weakness clearly and then justified this fully in the context of the study.

Weaker responses gained one mark for the identification of a weakness but did not fully justify the weakness or gave a generic weakness only, for no credit.

- (f) The researchers collected quantitative data when recording whether the participant would help the confederate or not for the helping behaviour study.

Explain **one** weakness of using quantitative data for the helping behaviour study.

(2)

One weakness of using ~~quantitative~~ quantitative data is that it lowers the validity of the study as we can't find out the reasons certain participants may or may not have helped, for example, motivational factors or perhaps some participants were in a rush so didn't have time to help. It doesn't let researchers explore the reasons behind it.



ResultsPlus
Examiner Comments

This response is given 2 marks, for:

- identification of a weakness of using quantitative data in context (1)
- justification of the weakness (1)

Question 2 (g)

Candidates were required to identify a weakness of using a field experiment for the study and then fully justify this in context for Q02g.

The best responses clearly identified a weakness and then fully justified the weakness in the context of the study.

Weaker responses gained one mark for identification of a weakness but did not fully justify the weakness, or gave a generic weakness only, for no credit.

(g) The researchers used a field experiment for the helping behaviour study.

Explain **one** weakness of using a field experiment for the helping behaviour study.

(2)

field experiments lack control over extraneous variables such as the time of day the study was conducted as some participants may have other obligations such as fetching children from school which may have altered whether a participant helped or not, reducing the internal validity of the study



ResultsPlus
Examiner Comments

This response is awarded both marks, for:

- identification of a weakness of using a field experiment in context (1)
- justification of the weakness (1)

Question 3 (a)

For Q03(a), candidates were required to identify a relevant and appropriate practical application of the study and then fully justify this using the data from Table 6.

The best responses clearly identified a practical application for the study and then fully justified this using data from the table. Common practical applications were:

- to empty bins regularly and keep the area around them clean
- for the US government to impose greater sanctions/fines
- to provide more education on problems with waste and benefits recycling

Weaker responses identified an appropriate practical application only, with no justification, or offered an irrelevant suggestion. Some candidates only gave a conclusion from the data table so could not be awarded credit.

The results of the participants' reaction to the confederate in the anti-littering study are shown in **Table 6**.

	Place		Disorder	
	New York City, USA	Bern, Switzerland	Clean	Littered
Participant gave a direct sanction to the confederate	2%	12%	8%	2%
Participant picked up the litter themselves (norm maintenance)	9%	27%	16%	1%
Participant had no reaction to the confederate	88%	61%	76%	97%

Table 6

(a) Explain **one** practical application of the anti-littering study using the data from **Table 6**.

(2)

People are more likely to conform to social norms depending on the original state of the bin, such as 16% was picked up in a clean area, whereas not picked up in a littered bin. This shows that if bins are kept clean people will be more likely to keep them clean, which governments may adopt to keep ~~the~~ roads more clean.



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Examiner Comments

This response receives both marks, for:

- identification of an appropriate practical application in context (1)
- justification of the practical application (1)

Total: 2 marks

Question 3 (b)

Candidates for Q03b were required to apply learning theories to the findings of the study. Then they were to use research evidence to support or refute how learning theories could account for the findings of the study.

The best responses used figures from the data table, and clearly and appropriately linked content from learning theories to account for the findings. They then used appropriate research evidence to justify their points. Social learning theory and operant conditioning were the most frequently-used learning theories, and the Bandura studies were the most frequently-used for research evidence.

Weaker responses focussed on application only and tended to give much knowledge and understanding about the theory, and then apply this. Some responses did not link the learning theories to the findings of the study or did not attempt this question.

(b) Using research evidence, explain how far learning theories could account for the findings of the anti-littering study.

(6)

Firstly, social learning theory may explain why people in Bern gave more direct sanction (12%) and picked up themselves (27%) than in New York at 2% and 9% respectively. People in Bern may pay attention to role models of higher status in the media of same sex, wealth, power etc who on TV programmes may pick up litter that someone else threw. This behaviour is distinct and paid attention to. This is then mentally rehearsed by the person watching the show or repeated exposure to the model cleaning the area so you retain how they picked it up. You may have low self-esteem but high self-efficacy so feel you want to be more like the role model, and believe you can start cleaning areas like them. Finally, on TV the role models may be rewarded ^{for} picking up litter e.g. praise or nicer environment to live in, which vicariously reinforces the person watching to do the same when seeing the person litter at a busy tram/subway stop. This explains why Bern, who may have more environmentally positive models than New York city, are more likely to pick up litter (norm maintenance).

This is supported by Bandura (1961) who found children exposed to an aggressive role model are more likely to display aggressive acts towards a Bobo doll than a non-aggressive model exposure. This proved, we can learn behaviours such as aggression or litter picking from our environment. As Bandura (1965) showed when we watch a film model be rewarded for a behaviour, we are more likely to repeat the behaviour, but when punished less likely to. Learning the behaviour was the same in both punished/reinforced/no consequence to the film model after punching.

another, but imitation increased when reinforced positively, so ~~if~~ Bern may positively vicariously reinforce good litter picking behaviour.

Alternatively, social identity theory would suggest we identify with a group e.g. 'environmentalists' or 'non-environmentalists' and adopt the group social norm as our self worth esteem is tied to the group, hence the environmentalists may pick up litter or give direct verbal sanction toward the litterer in order to fit with their group norm.' Bern may have more of a social norm to pick up others litter than ~~in~~ New York, explaining the difference in behaviour.



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This response is given marks for:

- AO2 mark for application of SLT to the findings in terms of role models (1)
- AO2 mark for application of SLT in terms of retention and self efficacy (1)
- AO2 mark for application of vicarious reinforcement applied to the findings (1)
- AO3 mark for Bandura (1961) in relation to the findings (1)
- AO3 mark for Bandura (1965) in relation to the findings (1)

Total: 5 marks

Question 4

Q04 was an extended open response question with the 'Evaluate' taxonomy, which targets both AO1 and AO3 content. AO1 was looking for knowledge and understanding of the studies or practical issues in design and implementation. AO3 was for analysis, interpretation, and evaluation of both studies in terms of how practical they could be considered and the implications of this, leading to judgements/conclusions.

Assessment of this question was through a levels-based mark scheme where a 'best-fit' approach was used: deciding which level most closely described the quality of the answer.

Candidate performance for this question maintained a similar standard to the previous 2022 series. There was no advance information this series, but the topic of practical issues in the design and implementation of the studies may account for this because some candidates focussed only on evaluating the studies. Whilst this was not directly evaluating them in terms of their practical issues in design and implementation, this was still creditworthy.

However, candidates who focussed only on evaluating the studies did not reach the higher levels for AO3 because they did not explore the implications of the choices made before and during the studies by the researchers.

The best responses gave accurate and thorough knowledge and understanding, usually of the studies. Then they considered the design and implementation of the studies in terms of practical issues. These responses weighted their response far more towards the analysis and evaluation (AO3) and considered the implications of the decisions made by the researchers to the studies and wider society.

Weaker responses focussed the majority of their attention on knowledge and understanding (AO1) with few evaluative or analytical statements (AO3). It was noticeable that some candidates focussed so much on the AO1 that they achieved beyond Level 4 for this element but may have only reached the bottom of Level 2 for their AO3, so their overall mark was limited by the imbalance in their response towards their AO1 instead of their AO3. These candidates would have been better to reduce the AO1 they offered (they could have still gained Level 4 for this element) and focus more on increasing the amount and detail of their AO3 content to achieve a stronger overall response.

The weakest responses gave very generic and vague information regarding the studies, with little to no evaluation.

- 4 Evaluate Rosenhan (1973) and Sherif et al. (1954/1961) in terms of their practical issues in design and implementation.

^{valid exper} Sampling, validity, experiment design, (16)

Rosenhan aim was to see if mental health ~~profession~~ professions such as psychiatrist could ~~see~~ diagnosed a mentally ill ~~patient~~ patient correctly. The participants were 8 'pseudopatients' (5 men, 3 women) all from different occupations such as a painter also included Rosenhan. ~~These~~ Participants were from 5 different states in the USA and were to call up different hospitals across USA and to report symptoms of hearing sounds such as 'emphs', 'hollow' and 'thud'; 12 hospitals different sizes. ^{different sizes} were included in the experiments. Patients were told to act in a normal way to ~~be~~ actual patients and ask questions to doctors and nurses. They found out that 71% of nurses ~~be~~ ignored questions from the 'pseudopatient' and psychiatrist thought that pacing up and down was a sign of anxiety where it was actually a 'normal' behaviour. Furthermore in the follow up study where Rosenhan was told to send more 'pseudopatient' for ~~hospitals~~ hospitals to see ~~the true~~ the difference between the false and true patients doctors said there were some 'pseudopatients' well in fact Rosenhan didn't send any.

In conclusion, Rosenhan ~~et~~ found that psychiatrists and clinicians couldn't tell the difference between mentally ill patients and pseudopatients.

~~One issue is~~ ~~not~~ ~~one issue is~~ one practical issue
of Rosenman is that he used ^{volunteering} ~~opportunistic~~ sampling.
This means he ~~for~~ ~~gamer~~ participants ~~that~~
~~were~~ ~~closer~~ ~~to~~ ~~him~~ through advertisement therefore,
we cannot see a full representation of the USA thus
results may not be generalised as all participants
may have a lower digit span therefore, they were
unable to recall all data given in the hospital
making results ~~unreliable~~ invalid.

Rosenman ~~didn't~~ ~~match~~ ~~the~~ ~~participants~~ ~~up~~ ~~data~~
may have included participant variable such as IQ and
age. 8 'pseudopatients' were from different occupations
~~therefore~~ ~~may~~ ~~not~~ and ages varied. therefore older
patients may have more experiences being in the
hospital ~~data~~ + due to poor health and therefore, they
may have acted more like a patient making
psychiatrist more difficult to tell the difference between
pseudo patient and real patients. Thus, this could have
hindered the results ~~as~~ ~~is~~ thus making it less valid.

~~7~~ ~~7~~ 7 pseudopatients diagnosed with Schizophrenia
one pseudopatient with manic depression and anxiety
and ~~the~~ ~~not~~ ~~all~~ ~~of~~ ~~them~~ took ~~the~~ medication prescribed

Sherrif et al claim was to see if prejudice and anti-social behaviour came from competition.

Sherrif used 24 boys aged 11/12 from USA, from Protestant ~~home~~ families, ^{more the typical} white and from school in Oklahoma. In Stage one, he separated two groups matched with age, IQ, ~~and~~ athletic ability. Both groups ~~had~~ have made names 'Rattlers' and 'Eagles'.

They were made to compete in stage two such as tag & war and other competition that had one winner. The winners received pocket knives (negative interdependence) ~~it was~~ it was zero sum.

After competitions Eagles ~~the~~ flag was set on fire causing prejudice and ~~name~~ calling such as 'pigeons'. In stage 3 Sherrif et al used superordinate goals such as watching a movie which required both teams working together. This did not reduce prejudice therefore, teams were asked to fix a water tank and a broken down bus. This reduced hostility and prejudice between 'Rattlers' and 'Eagles'. In conclusion, it was found that prejudice was prevalent when competition was present to overcome the superordinate goals we needed.

Shenit used matched pairs designed for all participants where the 24 pseudopatients 11/12 were matched based on IQ, age and athletic ability. This would mean that results can be valid and make a conclusion that prejudice increased due to competition and not due to other teams more stronger and smarter than winning. ~~This~~ This would combat participant variables which can hinder in this experiment of prejudice.

However, Rosenhan did not match pseudopatients (5 men, 3 women) as ages did vary thus it can mean participants variables can interfere with results making it unreliable.

Shenit used a field experiment ~~that~~ as it took place in a campsite ~~where~~ having ecological validity.

~~However~~ This means the design of experiment can be generalised as it took place in a real life setting.

~~However~~ Rosenhan also ~~to~~ used a field experiment where pseudopatients from 5 states in Oklahoma, went to 12 different hospitals. Pseudopatients can get accurate information as ~~hospital~~ hospitals weren't aware accept for the managing team thus results can be valid and ~~that~~ we can use this data to make mental health hospitals better.



The AO1 is placed in Level 4 – Demonstrates accurate and thorough knowledge and understanding.

The AO3 is placed in Level 2 – Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made.

Overall, the response was placed in Level 3

Total: 9 marks

Level 3

Question 5

Q05 was an extended open response question with the 'Evaluate' taxonomy and a scenario that targeted AO1, AO2 and AO3 content.

AO1 was looking for knowledge and understanding of biological psychology and AO2 was application to the scenario given in the question about the ability to read. AO3 was analysis, interpretation, and evaluation of the ideas presented from biological psychology, or how other alternative ideas can account for human behaviour and the implications of this, leading to judgements/conclusions.

Assessment of this question was through a levels-based mark scheme where a 'best-fit' approach was used; deciding which level most closely described the quality of the answer. Consideration was also given regarding this question requiring equal amounts of AO1, AO2, AO3 (4/12 to AO1, 4/12 to AO2, 4/12 to AO3).

General performance on this question was slightly better than in 2022 but very similar overall. Similarly to 2022, there were more blank responses than usual, perhaps again due to candidates focussing more on Q04 and Q06, which had noticeably more written by candidates than in series' prior to the COVID-19.

The best responses focussed on offering a balance of AO1, AO2 and AO3 content. They demonstrated knowledge and understanding of biological psychology, applied this to the scenario, and then offered evaluation and analysis leading to judgements and conclusions. Common content used by candidates in their response included evolution and genes, hormones, the function of different parts of the brain, and Freud for their AO1 and AO2. Social learning theory and operant conditioning were frequently used as part of the AO3, as were research studies for biological psychology, such as Raine et al (1997).

Weaker responses focussed very narrowly on one or two areas of biological psychology using more generic, vague statements, with little or no evaluation or analysis in their response. There was frequently an imbalance towards AO2 content, in particular, which largely recycled information from the scenario, instead of using the knowledge and understanding to apply in a focussed and engaged way to the novel scenario presented.

- 5 Ada was reading a book about a woman who became a police officer and solved an important crime. She enjoyed reading the book so much that she read it all in a single day. Ada's mum has always really enjoyed reading books and Ada had always had excellent reports from school about her reading development.

Ada's friend Daniel does not enjoy reading and never has. He told Ada that he preferred to play video games, particularly games about sport. Daniel's dad enjoys reading and playing video games. When he was younger, Daniel had been asked to read more by his school and was always given extra support for his reading development.

Evaluate the extent to which human behaviour, such as the ability to read, can be explained by biological psychology.

You must make reference to the context in your answer.

(12)

Brain structure can be used to explain good reading ability. Some of the areas in the brain could have higher metabolic activity in areas associated with reading but also skills around reading. For example, the frontal lobe has been linked to good decision-making skills, creativity and problem-solving. The Broca's area is found in the left frontal lobe, and has commonly been associated with speech production. The Wernicke's area is found in the temporal lobe (left) and is associated with hearing and understanding language. We all need an intact and fully functioning Wernicke's area and Broca's area in order to produce meaningful, coherent speech that ~~we~~ we can understand well. Our brain structure is pre-determined, as our

brain structure has already been formed when we are born. Therefore, ~~this~~ this part of psychology is nature & nurture that are reading ability too, has already been distilled in us.

In the case of Ada, she has always enjoyed reading books and seems to read fluently and quickly, as she read the book about the police officer in 1 day. Perhaps Ada has a higher metabolic activity in her Broca's area, as when she reads she can easily say the word aloud. Her Wernicke's area ~~could~~ could also be very well developed.

The fact that she quickly read the book in 1 day, hints that she must be able to easily understand written language. Ada could be predisposed to having good reading development biologically, as even at a young age her reports have highlighted very good reading ability. Daniel on the other hand could struggle with reading as he may have a ~~low~~ low metabolic activity in these 2 areas of the brain associated with language. Perhaps he inherited this lower activity. He may also suffer from brain damage to that area which causes him to suffer from the poor reading ability.

There's research evidence to support differences in

Metabolic activity in brains of different people
For example, Koebe et al (1997) wanted to look at brain differences in murderers and non-murderers. Koebe injected each participant with a radioactive glucose tracer, then got the participants to do a 30 minute CPT task. Koebe found a lower metabolic activity in the murderers' corpus callosum and left amygdala. This research suggests that some people have different brain activity to others. However one weakness of Koebe et al was that the scans were measured in relation to the anatomical line. This varies significantly between people so the results interpreted are likely to be wrong. This reduces the validity of the results.

However, reading ability can also be explained by social learning theory. Ada's mum had always enjoyed reading. Ada is likely to look up to her mum as a role model and may have learnt to enjoy reading from her mum. This could be why she is such a fluent reader. Daniel on the other hand may not like reading due to social influence from his dad, who never liked reading & prefers to play video games. Perhaps Daniel's lack of enthusiasm for reading comes

from his dad. He will observe his dad enjoying video games & will remember how much his dad likes playing them. He will then try the games himself & is more ~~likely~~ likely to stick at the games as he sees his dad, who is a role model, enjoy them.

One application of social learning theory is in parenting. If parents know the impact that their actions can have on their children, they could change the way they portray activities like reading to improve their own child's motivation to read & improve their reading ability.

In conclusion I think reading ability is best explained by brain structure, but equally social learning theory can explain why someone is good at reading.



This response was awarded 7 marks.

The AO1 is placed in Level 3 – Demonstrates accurate knowledge and understanding.

The AO2 is placed in Level 3 – Line(s) of argument supported by applying relevant evidence from the context (scientific ideas, processes, techniques and procedures). Might demonstrate the ability to integrate and synthesise relevant knowledge.

The AO3 is placed in Level 2 – Candidates will produce statements with some development in the form of mostly accurate and relevant factual material, leading to a superficial conclusion being made.

Overall, the response was awarded Level 3.

Total: 7 marks

Level 3

Question 6

Q06 was an extended open response question with the 'Assess' taxonomy, which targeted both AO1 and AO3 content.

AO1 looked for knowledge and understanding of ethical issues, including psychological theories, studies, methods. AO3 was analysis, interpretation, and evaluation of ethical issues, using content from psychology and the implications of this, leading to judgements/conclusions of how far they could be considered ethical.

Assessment of this question was through a levels-based mark scheme where a 'best-fit' approach was used. Consideration was also given regarding this question requiring greater AO3 content than AO1 (8/20 to AO1, 12/20 to AO3).

General performance on this question was very slightly lower than in 2022 but overall very similar. There was no advance information offered in 2023, and candidates do generally find ethics more accessible than some other topics on the specification. These reasons could account for the performance of this essay. Because this question related to human and animal ethical issues, candidates tended to write a large amount and perhaps this reduced the time they chose to spend on other questions, such as Q05.

The best responses considered the imbalance required towards the AO3 content and offered accurate and thorough knowledge and understanding, as well as a well-developed and logical assessment. The AO1 presented tended to be a mix of ethical guidelines and psychological research. The AO3 focussed on how ethical the studies could be considered, and the wider implications of ethics for psychological research.

It was noticeable how those candidates who scored higher marks showed high levels of accuracy in their understanding and assessment of ethics compared with weaker responses, which generally had numerous inaccuracies and misconceptions about human and/or animal ethics.

Weaker responses tended to focus on very similar ideas of what the guidelines were and the same set of research studies such as Milgram, Bandura, Watson and Rayner, Pavlov, and Harlow. Whilst much was written by the majority of candidates, weaker responses tended to write unfocussed, inaccurate statements and a large amount vague, generic content. Those receiving the lower marks also tended to focus more on AO1 than AO3 content, rather than the imbalance towards AO3, which would have enabled a higher mark overall.

6 Assess the ethical issues in psychological research using humans and animals.

(20)

Ethical issues in psychological research relate to protecting the participants of the study. For humans, this means adhering to the BPS code of ethics and conduct, which states psychologists must have integrity, respect, ^{and} responsibility. ~~and~~ For animals, psychologists should reduce, replace and reintegrate where possible, as well as providing adequate shelter and food.

For humans, one ethical issue ^{in research} is the right to withdraw. This states that all participants must be allowed to leave the research at any point, including removing their data afterwards.

A strength of this is that there is research to support it. Milgram gave his participants a brief and told them that they could withdraw from his obedience study if they wished to do so. This supports the ethical issue of giving participants the right to withdraw.

However, it can be argued that the participants of Milgram's study

were not actually given the right to withdraw. If a participant asked to stop the experiment, they were told to carry on or the research wouldn't work. This happened 5 times before they were actually allowed to leave. Therefore, the participants were not truly given the right to withdraw during the experiment.

For animals, one ethical issue^{in research} is replacing animals. If possible, researchers should replace animals with non-living subjects. If this isn't possible they should use non-protected species, and not endanger the species' chance of survival.

A strength of this ethical issue is supporting studies. Skinner conducted an experiment into conditioning learning behaviours. He used rats to conduct his experiment, which is an ethical strength because they are not a protected species and using them in his research would not have impacted endangered species.

However, a study which did not ~~at~~ adhere to this ethical guideline is Pavlov. During this study, Pavlov used dogs to study

salvatory reflexes. Pavlov did not choose to replace his research subjects with less protected species, such as mice, which goes against the ethical issue of replacing animals in psychological research.

For humans, another ethical issue in research is protection from harm. This means that no participants should undergo physical, psychological or emotional trauma during the research.

A study which did not adhere to this ethical issue is Watson and Rayner. During the research, little Albert had a metal rod struck behind his head, causing him to develop a fear response and a phobia.

This is an example of not protecting a participant from harm, because the psychological and emotional damage he underwent as a baby could stay with him forever.

However, a study that does adhere to this ethical guideline is Sebastian and Hernandez-Gil. During this experiment, participants were asked to recall digits from a sequence. This is unlikely to have caused the participants any kind of harm, which

means the ethical issue was considered and adhered to.

In animal research, another ethical issue is reducing the number of animals used. This allows fewer animals to be put potentially at risk during the study.

A supporting study for this ethical issue is Watson and Rayner. During this study, ~~the~~ little Albert was presented with a single white rat. This means that only one animal was put at risk in this study into phobias, which is an ethical strength.

However, other psychological studies, such as the lesioning of mice brains to study the effects of drugs, did not keep the number of animals minimal, cutting into many of their brains. This is an ethical issue of psychological research with animals.

Another ethical issue in ~~ps~~ research with humans is informed consent. This means that before the research takes place, participants should be briefed on the aims of the study and give permission to take part.

A strength of this ethical consideration is that it's supported by Rosenhan. The 8 pseudopatients in the study knew the aim of the study, and give informed consent to go to the hospitals, pretending to have a mental health condition. This is an ethical strength of the research.

However, the doctors and nurses^{in the hospitals} ~~study~~ were not aware that they were the true participants in the study, so they did not give informed consent to take part in the research. This means Rosenhan did not fully consider this ethical issue in his research.

In conclusion, in both human and animal research it is important to consider the ethical issues before conducting or using research, as the participants of the study should be comfortable and safe.



The AO1 is placed in Level 3 – Demonstrates accurate knowledge and understanding.

The AO3 is placed in Level 3 – Arguments developed using mostly coherent chains of reasoning, leading to an assessment being presented that considers a range of factors. Candidates will demonstrate understanding of competing arguments/factors but are unlikely to grasp their significance. The assessment leads to a judgement but this will be imbalanced.

Overall, the response is placed in Level 3

Total: 9 marks

Level 3

Paper Summary

Based on their performance on this paper, candidates should:

- Include a full title, axes, including labels, and carefully plot the data, as appropriate, if asked to draw a graph
- Avoid generic statements when given a novel scenario. All responses should be in the context of the study given
- Fully justify any points given if the question is offering two available marks, such as for a strength, weakness, or an improvement
- Balance AO1, AO2, and AO3 and include the requisite amount of evaluation if given a 12-mark question with a scenario, such as Q05 on this paper.
- Offer an imbalance towards AO3 content on evaluate or assess questions worth 16 marks or 20 marks with no scenario, such as Q04 and Q06 on this paper, whilst offering enough time to attempt all questions fully, on the paper

Grade boundaries

Grade boundaries for this, and all other papers, can be found on the website on this link:

<https://qualifications.pearson.com/en/support/support-topics/results-certification/grade-boundaries.html>

