

OCD:

Characteristics, explanations and treatment

Q1.

Bob always checks that doors are locked and plug sockets are switched off. His checking routine has become very time consuming. He now feels overwhelmed with fears that his family could be in danger if he does not complete his checking routine. His doctor thinks Bob has obsessive compulsive disorder.

- (a) Explain what is meant by 'obsessions' and 'compulsions'. Refer to Bob in your answer.

(4)

- (b) Bob's doctor is sending him for a brain scan and is looking into his family history.

How might the biological approach be used to explain Bob's obsessive-compulsive disorder?

(4)

(Total 8 marks)

Q2.

Read the item and then answer the questions that follow.

Researchers analysed the behaviour of over 4000 pairs of twins. The results showed that the degree to which obsessive-compulsive disorder (OCD) is inherited is between 45% and 65%.

- (a) Distinguish between obsessions and compulsions.

(2)

- (b) With reference to the study described above, what do the results seem to show about possible influences on the development of OCD?

(4)

(Total 6 marks)

Q3.

Outline **one** behavioural and **one** cognitive characteristic of obsessive-compulsive disorder (OCD).

(Total 4 marks)

Q4.

Which **two** of the following are cognitive characteristics of obsessive compulsive disorder (OCD)?

Choose **two** from the options **A, B, C, D** and **E**.

- | | |
|---|--------------------------|
| A Awareness that behaviour is irrational | <input type="checkbox"/> |
| B Compulsions | <input type="checkbox"/> |
| C Disgust | <input type="checkbox"/> |
| D High anxiety | <input type="checkbox"/> |
| E Obsessions | <input type="checkbox"/> |

(Total 2 marks)

Q5.

Two different drug therapies were tested on a group of patients. All the patients suffered with the same anxiety disorder. Half the patients were given **Therapy A** and the other half were given **Therapy B**. Improvement was assessed on a scale from 0-25, where 0 = no improvement.

The table below shows the improvement made between the start and the end of the treatment.

Average and range of improvement scores

	Average	Range
Therapy A	6.5	2 – 19
Therapy B	6	4 – 9

Explain what these findings suggest about the different therapies?

Extra space _____

(Total 4 marks)

Q6.

Outline and discuss **one** biological explanation for obsessive-compulsive disorder.

(Total 6 marks)

Mark schemes

Q1.

(a) [AO1 = 2 AO2 = 2]

1 mark for a definition of obsessions – obsessions are intrusive/recurring/unwanted thoughts

1 mark for a definition of compulsions – compulsions are repetitive behaviours/acts.

1 mark for application of knowledge of obsessions to the scenario – Bob is overwhelmed by fear that his family will be in danger due to him.

1 mark for application of knowledge of compulsions to the scenario – Bob checks that doors are locked or plug sockets switched off before he can leave the house.

(b) [AO2 = 4]

Level	Marks	Description
2	3 – 4	There is a clear knowledge of biological explanation(s) for OCD with some accurate detail. Application is effective. The answer is generally coherent with effective use of appropriate terminology.
1	1 – 2	There is limited or partial knowledge of biological explanation(s) for OCD with some detail. Application is limited or absent. The answer lacks coherence and use of appropriate terminology.
	0	No relevant content.

Possible content:

Neural explanations (neurochemical and neurophysiological) – Bob is having a scan.

- The basal ganglia and other circuits have been implicated suggesting that disturbed communication in these structures might account for the repetitive behaviours seen in Bob's OCD. Also, OCD linked to abnormality/excessive activity in the orbital frontal cortex/thalamus; abnormal functioning of the parahippocampal gyrus – related to the regulation of unpleasant emotions.
- Low levels of neurotransmitters, eg serotonin - serotonin might be removed too quickly before impulses have passed.

Genetic explanations – Bob's family history is being looked at

- Focus on the search for gene markers that Bob might have inherited – gene 9, COMT, SERT.
- Family studies indicate a higher percentage of first degree relatives, ie Bob's parents, have this disorder – 10% compared to the prevalence rate of 2%.

Accept other relevant information.

Q2.

(a) **[AO1 = 2]**

2 marks for a clear and coherent answer emphasising internal vs external distinction: obsessions are internal components because they are thoughts, and compulsions are external components because they are behaviours.

1 mark for a muddled or vague answer in which the distinction is suggested but is unclear or incomplete.

OR

1 mark for straightforward definition of **each** component (obsessions are intrusive thoughts, compulsions are repetitive behaviours / acts).

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

Level	Marks	Description
2	3 – 4	Research findings are clearly explained in terms of both genetic and alternative explanation(s) and are mostly accurate. The answer is generally coherent with effective use of terminology.
1	1 – 2	Research findings are explained with some link to genetic and / or alternative explanation(s). The answer lacks accuracy and detail. Use of terminology is either absent or inappropriate.
	0	No relevant content.

Content:

- results indicate development of OCD is at least partly genetic
- the findings suggest that heritability is high (between 45% and 65%)
- this means that there must also be other explanations (inherited influence is not 100%)
- so other factors (eg environment or other bio factors) may also partly account for OCD.

Q3.**[AO1 = 4]**

Level	Marks	Description
2	3 – 4	There is a clear and detailed outline of a relevant behavioural and cognitive characteristic of obsessive-compulsive disorder (OCD). The answer is generally coherent with effective use of appropriate terminology.
1	1 – 2	There is a vague /muddled outline of a relevant behavioural and cognitive characteristic of obsessive-compulsive disorder (OCD). The answer lacks coherence and use of appropriate terminology. Either behavioural or cognitive only at Level 2.
	0	No relevant content.

Possible content:

- Behavioural characteristic – this is the compulsion element of the disorder, where a behaviour is performed repeatedly in order to alleviate anxiety
- Cognitive characteristic – this is the obsessive element of the disorder, where the sufferer experiences unwanted/intrusive thoughts or images that cause distress

Credit other relevant characteristics eg avoidance (behavioural)

Q4.**[AO1 = 2]****A and E**

Q5.

AO3 = 4

- The two averages are very similar, suggesting that both therapies are as good as each other.
- The range of each group is very different. This suggests that for some people Therapy A was very beneficial, but for others it had little benefit. For Therapy B, there was a much smaller range, suggesting that it has a similar effect on improvement for all the patients.

4 marks Effective interpretation of data Effective interpretation that demonstrates sound knowledge of what the data shows, with reference to both the average and the range.
3 marks Reasonable interpretation of data Reasonable interpretation of what the data shows; or effective interpretation of either the average or the range.
2 marks Basic interpretation of data Basic interpretation of what the data shows.
1 mark Rudimentary interpretation of data Rudimentary, muddled interpretation of the data, demonstrating very limited knowledge. Or reference to, for example, larger range/higher average/similar range.
0 marks No creditworthy material.

Q6.**[AO1 = 2 AO3 = 4]**

Level	Marks	Description
3	5 – 6	Outline of one biological explanation for OCD is clear and accurate. Discussion is thorough and effective. The answer is clear and coherent. Specialist terminology is used effectively.
2	3 – 4	Outline of one biological explanation for OCD is present though there may be some inaccuracy/lack of clarity. Discussion is present but may lack detail. There is some appropriate use of specialist terminology.
1	1 – 2	Outline of one biological explanation for OCD may be brief with little elaboration or clear but there is no discussion present. Attempted discussion may be partial or inappropriate. The answer may include inaccuracies and be poorly organised. Specialist terminology is either absent or inappropriately used.
	0	No relevant content.

AO1 Possible content:

- Genetic influence – inherited predisposition/vulnerability; based on concordance rates within family/twin studies
- Biochemical causes eg low levels of serotonin in the brain; linked to obsessive thoughts
- Neurophysiological causes eg hyperactivity of basal ganglia; linked to repetitive motor functions

Accept other valid explanations.

AO3 Possible discussion

- Use of evidence to support/contradict explanations
- Confounding influence of environment in genetic explanation
- Effectiveness of drug treatment eg SSRIs
- Not effective for all patients
- Issues of generalisation/replication
- Broader issues: determinism; reductionism

Accept other valid discussion points.

Do not accept methodological evaluation of evidence unless used explicitly to discuss the explanation.

Examiner reports

Q1.

- (a) Where students clearly understood what was meant by obsessions and compulsions, there were some excellent answers provided, which gained full marks. However, it was disappointing to see a significant minority who did not understand the terms or who had muddled obsessions and compulsions. Knowledge of the terms was sometimes incomplete, which limited the number of marks awarded. For example, some students simply referred to obsessions as 'thoughts' without the addition of some other relevant descriptor (eg 'intrusive') and others referred to compulsions as 'behaviours/acts' without the 'repetitive' aspect. The application to 'Bob' was often accurate and clear where students had a clear understanding of obsessions and compulsions. However, those who muddled the terms also tended to also muddle the application and thus didn't get the marks.
- (b) There were excellent responses from some students who provided clear and detailed knowledge of biological explanations of OCD, which were effectively applied to 'Bob'. Superb detailed knowledge was seen in some students' answers relating to the COMT/SERT genes and the role of the orbital frontal cortex. A variety of biological explanations were given with genetic explanations being the most common but typically these responses tended to be less detailed than those answers that focussed on the neural aspect.

Unfortunately, a minority of students produced accurate and detailed knowledge of biological explanations but had no application in their response, thereby limiting marks to level 1. Most students demonstrated some knowledge of biological explanations of OCD and thus most gained some marks but a minority simply wrote generic answers about genes and inheritance without explicit links to OCD.

Q4.

This was a multiple choice Question where the answers were A and E. This was done reasonably well, but it was clear that a minority of students had not read the question carefully and had missed the key word, 'cognitive'.

Q5.

It was encouraging to see that this cohort of candidates was able to go beyond simply describing the findings. They were able to make suggestions about what they showed. For example, that both therapies showed some improvement, as there were no scores of zero; that in fact neither showed much improvement as the average was only 6.

However, it was also clear from the responses that a minority of candidates had no real understanding of what range tells us about data.