

A-level PSYCHOLOGY

Paper 3 Issues and options in psychology

Thursday 22 June 2017

Afternoon

Time allowed: 2 hours

Materials

For this paper you must have:

- an AQA 16-page answer book.

You may use a calculator.

Instructions

- Use black ink or black ball-point pen.
- Write the information required on the front of your answer book. The **Paper Reference** is 7182/3.
- In **Section A**, you should answer **all** questions.
- In **Section B**, choose **one** topic. Answer **all** questions on the topic you choose.
- In **Section C**, choose **one** topic. Answer **all** questions on the topic you choose.
- In **Section D**, choose **one** topic. Answer **all** questions on the topic you choose.
- Do all rough work in your answer book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 96.
- You will be marked on your ability to:
 - use good English
 - organise information clearly
 - use specialist vocabulary where appropriate.

Section A**Issues and debates in Psychology**

Answer **all** questions in this section.

0	1
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Which of the following best describes a reductionist approach in psychology?
Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** Explaining behaviour in a complicated way in terms of complex mechanisms.
- B** Explaining behaviour in a simple way in terms of basic units.
- C** Explaining behaviour in one way and ignoring all other explanations.
- D** Explaining behaviour in several different ways at the same time.

0	2
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Which of the following best describes an idiographic approach in psychology?
Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** Studying individuals in order to establish general laws of behaviour.
- B** Studying individuals without intending to establish general laws of behaviour.
- C** Studying large samples in order to establish general laws of behaviour.
- D** Studying large samples without intending to establish general laws of behaviour.

A psychologist asked men aged 25 to 35 years to keep a diary record of how many miles they walked in a week. The psychologist also asked each man to climb a flight of stairs, then took each man's heart rate. For each man, the number of miles walked in the week was correlated with heart rate after climbing stairs. The findings showed a significant negative correlation. A national newspaper reported the findings under the headline 'Everyone should walk for a healthy heart'.

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Explain how the newspaper headline might be an example of beta bias.

[2 marks]

0	4
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Briefly suggest **one** way in which psychologists might address the problem of beta bias in their research.

[1 mark]

0	5
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Explain **one** problem with the method used to determine the number of miles walked in the week. Suggest an alternative measure that would overcome this problem.

[3 marks]

0	6
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Dancho is a talented and famous musician. He was taught to play the piano by his father who was a concert pianist. From the age of four years Dancho attended a specialist music school where he spent many hours each day practising the piano.

In a recent TV interview Dancho said, 'My earliest memories are of notes and melodies, so music is a part of me. To hear the applause in the concert hall is what I live for. Even if I wanted to stop playing, I could not.'

Discuss **two or more** types of determinism. Refer to the case of Dancho as part of your discussion.

[16 marks]

Turn over for Section B

Section B**Relationships or Gender or Cognition and development**

Choose **one** topic from **Section B**. Answer **all** questions on the topic you choose.

Topic: Relationships

0	7
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Which **two** of **A, B, C, D** and **E** are important factors in attraction according to the filter theory of attraction? Write the **two** correct letters in your answer book.

[2 marks]

A Personal compliments

B Profit and loss

C Self-disclosure

D Similarity in attitude

E Social demography

0	8
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In 1992, a book about human relationships was published in London. The book was written by Steve Duck from the University of Iowa. The title was 'Human Relationships'. The book was published by Sage.

A researcher needs to modify the above information to include Duck's book in the references section of a scientific report.

Write the full reference for this book as it should appear in the reference section of the researcher's report.

[2 marks]

0	9
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Barbara and Jamima are both having relationship difficulties with their respective partners.

Barbara says, 'I'm really fed up and I wish the relationship was over. But I can't tell him, because he thinks everything is fine.'

Jamima says, 'We are getting through it slowly. We've told the children what's going to happen to them and sorted out the money side. My mum was upset but she's OK about it now. Friends take sides of course.'

Referring to Barbara's and Jamima's comments, outline **two** phases of relationship breakdown proposed by Duck.

[4 marks]

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Discuss what psychological research has told us about virtual relationships in social media.

[16 marks]

Topic: Gender

1	1
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According to psychoanalytic theory, which **two** of **A, B, C, D** and **E** have a very important role in gender development? Write the **two** correct letters in your answer book.

[2 marks]

- A** Identification
- B** Imitation
- C** Initiation
- D** Internalisation
- E** Interpretation

1	2
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In 1993, a book about gender was published in New Haven. The book was written by Sandra L Bem from Cornell University. The title was 'The lenses of gender: transforming the debate on sexual inequality'. The book was published by Yale University Press.

A researcher needs to modify the above information to include Bem's book in the references section of a scientific report.

Write the full reference for this book as it should appear in the reference section of the researcher's report.

[2 marks]

Topic: Gender continues on the next page

1	3
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Two mothers are talking about their respective children Ben and Dido. One of the children has Turner's syndrome and the other has Klinefelter's syndrome.

Ben's mum says, 'He had problems at school, and there were physical differences too.'

Dido's mum says, 'She did better at schoolwork in some ways than other children. But physically, there will always be noticeable differences.'

Referring to the comments about Ben and Dido, outline Turner's syndrome **and** Klinefelter's syndrome.

[4 marks]

1	4
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Discuss what psychological research has told us about atypical gender development.

[16 marks]

Topic: Cognition and development

1	5
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Which **two** of **A, B, C, D** and **E** have a role in the development of social cognition? Write the **two** correct letters in your answer book.

[2 marks]

- A** Class inclusion
- B** Class perspective
- C** Mirror neurons
- D** Person permanence
- E** Theory of mind

1	6
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In 1980, a book about social cognition was published in New York. The book was written by Robert L. Selman from Harvard University. The title was 'The growth of interpersonal understanding: developmental and clinical analyses'. The book was published by Academic Press.

A researcher needs to modify the above information to include Selman's book in the references section of a scientific report.

Write the full reference for this book as it should appear in the reference section of the researcher's report.

[2 marks]

1	7
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Two mothers are describing how their respective babies, Billy and Milo play.

Billy's mum says, 'When you give him anything he puts it straight in his mouth. He seems to think everything is for eating. I gave him a rattle the other day and he just chewed on it.'

Milo's mum says, 'Milo used to do just the same, but now he knows the difference between toys that make a rattle noise and toys that don't. So he knows which ones to shake and which ones to chew.'

Referring to the comments about Billy and Milo, outline Piaget's theory about schema development.

[4 marks]

1	8
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Discuss what Baillargeon's research has told us about early infant abilities.

[16 marks]

Turn over for Section C

Section C**Schizophrenia or Eating behaviour or Stress**

Choose **one** topic from **Section C**. Answer **all** questions on the topic you choose.

Topic: Schizophrenia

1	9
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Which of the following best describes neural correlates as an explanation for schizophrenia? Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** There is a correlation between brain plasticity and symptoms of schizophrenia.
- B** There is a correlation between brain structure and function and symptoms of schizophrenia.
- C** There is a correlation between dysfunctional thinking and symptoms of schizophrenia.
- D** There is a correlation between size of neurons and symptoms of schizophrenia.

2	0
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Below are four evaluative statements about token economies as used in the treatment of schizophrenia. Which statement is **TRUE**? Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** Token economies can be used effectively in any environment.
- B** Token economies have a positive effect on thinking.
- C** Token economies help to promote acceptable behaviours.
- D** Token economies address the cause of the problem.

2	1
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Jack has been diagnosed with schizophrenia. He describes his family background to his therapist:

‘I could never talk to mum. She fussed over me all the time. I tried to do what she said, but could never please her. One minute she seemed all affectionate and the next minute she would make nasty comments. My dad hated all the arguments and stayed out of it.’

Describe the family dysfunction explanation for schizophrenia and explain how Jack’s experiences can be linked to the family dysfunction explanation.

[8 marks]

2 2

Briefly discuss **two** limitations of the family dysfunction explanation for schizophrenia.

[6 marks]**2 3**

Outline and evaluate the use of antipsychotic drugs to treat schizophrenia.

[8 marks]

Topic: Eating behaviour

2 4

Which of the following best describes situations where disinhibition leads to overeating? Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** When environmental cues trigger a loss of control.
- B** When it would seem rude not to eat what you are given.
- C** When you are so hungry you cannot stop eating.
- D** When you do not care what other people think about you.

2 5

Below are four evaluative statements about the boundary model of obesity. Which statement is **TRUE**? Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** The model ignores the role of cognition in eating behaviour.
- B** The model only explains the behaviour of restrained eaters.
- C** The model takes account of biological factors in eating behaviour.
- D** The model takes no account of the effect of motivation on eating behaviour.

Topic: Eating behaviour continues on the next page

2	6
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Mia has been diagnosed with anorexia nervosa. She describes her family background to her therapist:

‘Mum worries about me constantly and I worry about her. She’s always asking me if I’m OK. She spends all her time thinking about me and wants to know everything I do. She even listens in when I’m on the phone. We go shopping together and swap clothes and make-up. But, it has always been the same, and we never argue at our house.’

Describe the family systems theory explanation for anorexia nervosa and explain how Mia’s experiences can be linked to family systems theory.

[8 marks]

2	7
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Briefly discuss **two** limitations of the family systems theory explanation for anorexia nervosa.

[6 marks]

2	8
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Outline and evaluate the evolutionary explanation for food preferences.

[8 marks]

Topic: Stress

2 9

A steroid hormone that regulates energy use and the immune system, secreted from the adrenal glands when stress is experienced.

Which of the following substances is described above?
Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** Adrenaline
- B** Adrenocorticotropin
- C** Corticotropin-releasing hormone
- D** Cortisol

3 0

Below are four evaluative statements about general adaptation syndrome (GAS). Which statement is **TRUE**? Write **A**, **B**, **C**, or **D** in your answer book.

[1 mark]

- A** It correctly explains how everyone responds in different ways to different sources of stress.
- B** It fails to explain what happens when a person is repeatedly exposed to stress.
- C** It is better at explaining female responses to stress than male responses to stress.
- D** It wrongly assumes that the body responds in the same way to different sources of stress.

3 1

Wally worries about work. He lies awake at night worrying that he is not good enough for the job and does not want to go to work in the morning. He thinks that his workmates laugh at him and gets embarrassed when they try to talk to him. He avoids his supervisor because he thinks that his supervisor will tell him off for not working hard enough.

Describe stress inoculation therapy as a way of managing stress and explain how Wally's stress could be managed using stress inoculation.

[8 marks]**3 2**

Briefly discuss **one** strength and **one** limitation of stress inoculation therapy as a way of managing stress.

[6 marks]**3 3**

Outline and evaluate **one or more** self-report scales that have been used by psychologists to measure stress.

[8 marks]

Turn over for Section D

Section D**Aggression or Forensic Psychology or Addiction**

Choose **one** topic from **Section D**. Answer **all** questions on the topic you choose.

Topic: Aggression

3	4
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Briefly explain how cognitive priming in the media might influence aggressive behaviour.

[2 marks]

A psychologist is investigating causes of aggressive behaviour. She interviews teenagers who have been in trouble at school. She asks them to describe their family and early childhood, recording everything that they say. She also looks at information in the teenagers' school reports.

3	5
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Referring to this investigation, explain the difference between primary and secondary data.

[4 marks]

3	6
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Explain how the psychologist could continue her investigation by carrying out thematic analysis of the interview recordings.

[2 marks]

3	7
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Describe and evaluate evolutionary explanations for human aggression.

[16 marks]

Topic: Forensic Psychology

3 8

Briefly explain the top-down approach to offender profiling.

[2 marks]

A psychologist is investigating causes of offending. She interviews offenders who are in prison for violent crime. She asks them to describe their family and early childhood, recording everything that they say. She also looks at information in the offenders' court and prison reports.

3 9

Referring to this investigation, explain the difference between primary and secondary data.

[4 marks]**4 0**

Explain how the psychologist could continue her investigation by carrying out thematic analysis of the interview recordings.

[2 marks]**4 1**

Describe and evaluate cognitive explanations for offending.

[16 marks]

Topic: Addiction

4 2

Briefly explain how dopamine is involved in nicotine addiction.

[2 marks]

A psychologist is investigating causes of addiction to gambling. She interviews people attending debt counselling for problem gamblers. She asks them to describe their family and early childhood, recording everything that they say. She also looks at information in the gamblers' debt counsellor reports.

4 3

Referring to this investigation, explain the difference between primary and secondary data.

[4 marks]**4 4**

Explain how the psychologist could continue her investigation by carrying out thematic analysis of the interview recordings.

[2 marks]**4 5**

Describe and evaluate cognitive theory as an explanation for gambling addiction.

[16 marks]**END OF QUESTIONS**

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Question number	
	<i>Section A: Issues and debates in psychology</i>
01	<i>B</i>
02	<i>B</i>
03	<i>The sample consisted only of men aged 25 to 35, yet the headline says that 'Everyone' should walk for a healthy heart. This assumes that the negative correlation between miles walked and heart rate would be the same for women, so possible differences between the sexes are ignored or minimised. Treating a male-only finding as if it applies equally to both sexes is beta bias.</i>
04	<i>Include both male and female participants in the sample (and compare their results), or make it clear in the report that the conclusion only applies to men aged 25 to 35.</i>
05	<i>The diary is a self-report measure, so the number of miles recorded may lack validity and reliability. Men are unlikely to know exactly how far they walked, may forget to record a walk on the day and estimate it later, or may overestimate to appear fitter (social desirability bias). The mileage scores may therefore not be a true record, which could distort the correlation with heart rate.</i> <i>A more objective alternative would be to give each man a pedometer (or GPS fitness tracker) to wear all week, which would record precisely how many miles he actually walked.</i>
06	<i>Determinism is the view that behaviour is caused by internal or external</i>

Question number	
	forces over which the individual has no control, so in principle behaviour can be predicted. Hard determinism argues that all behaviour is entirely caused and free will is an illusion. Soft determinism (James) argues that behaviour has causes but that people still have some conscious control, for example through their thought processes, within certain constraints. Biological determinism claims behaviour is governed by internal biological factors such as genes, neurochemistry and brain structure. Dancho's talent could be inherited from his father, a concert pianist. His claim that 'my earliest memories are of notes and melodies, so music is a part of me' suggests he sees his ability as innate, as if biology is destiny. Environmental determinism claims behaviour is shaped by external forces such as upbringing, parents, schools and learning. Dancho was taught by his father, so he could have learned through modelling and imitation (social learning theory). He attended a specialist music school from the age of four and practised for hours every day, and the applause in the concert hall acts as positive reinforcement (operant conditioning) that maintains his playing. His statement 'Even if I wanted to stop playing, I could not' reflects hard determinism, since he experiences his behaviour as out of his control. Psychic determinism (Freud) claims behaviour is determined by unconscious drives and childhood experiences, so nothing is truly chosen. Dancho may have resolved the Oedipus complex by identifying with his concert pianist father and internalising his father's identity, so his compulsion to play may be driven by an unconscious need for his father's approval. A strength of determinism is that it is consistent with the aims of science. Identifying the causes of behaviour allows prediction and control, which is the basis of laboratory experiments. If we understood the causes of Dancho's talent, we could nurture similar talent in other children

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number

through education. However, psychic determinism is unfalsifiable, because unconscious motives such as Dancho's identification with his father cannot be observed or tested empirically.

Dancho's case also shows the problem of looking for a single cause. His father gave him both his genes and his training, so biological and environmental influences are confounded and cannot be separated. Ericsson et al. (1993) found that expert violinists had accumulated far more hours of deliberate practice than less accomplished players, suggesting environment is important, but an interactionist view, where innate aptitude and practice combine, is more realistic than either form of determinism alone.

Hard determinism conflicts with our everyday experience of making choices. Dancho presumably chooses which pieces to play and when to perform, so soft determinism offers a better compromise: his behaviour is strongly influenced by his upbringing and biology, but he can still exercise some conscious control. Research also suggests that believing in free will is beneficial: Roberts et al. (2000) found that adolescents with a strong belief in fatalism were at greater risk of depression.

Finally, determinism has important implications for society. The legal system assumes free will and moral responsibility, whereas hard determinism implies that people cannot be blamed for their actions.

Overall, a soft determinist and interactionist position best explains Dancho's behaviour and avoids the ethical problems of the hard determinist stance.

Question number	
	<i>Section B: Relationships</i>
07	<i>D and E</i>
08	<i>Duck, S. (1992). Human relationships. London: Sage.</i>
09	<i>Barbara is in the intrapsychic phase, the first phase of Duck's model, in which one partner privately broods on their dissatisfaction with the relationship and weighs up the costs and benefits of leaving, without expressing this to the partner. Barbara wishes the relationship was over and worries about telling him, but has not done so, as he 'thinks everything is fine'.</i>
	<i>Jamima is in the social phase, in which the breakdown is made public to the wider social network, practical issues such as children, money and assets are negotiated, and friends and family take sides. Jamima has told her children what will happen, sorted out the money, her mum knows, and 'friends take sides'.</i>
10	<i>Research into virtual relationships has focused on self-disclosure, which is often greater online. Reduced cues theory (Sproull and Kiesler, 1986) argues that computer-mediated communication lacks the non-verbal cues present face-to-face, such as facial expression and tone of voice. This leads to deindividuation, which causes disinhibition, so people may disclose more but may also behave in hostile ways, for example by 'flaming'.</i>
	<i>The hyperpersonal model (Walther, 1996) argues that virtual relationships can be more personal and intimate than face-to-face ones. Because communication can be asynchronous, people engage in selective self-presentation, carefully controlling their online persona, which can be</i>

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hyper-honest or hyper-dishonest. Self-disclosure happens faster, so intimacy develops sooner, and the receiver tends to idealise the sender. Bargh et al. (2002) found that people felt they could express their 'true self' more easily online.

Another explanation is the absence of gating (McKenna and Bargh, 1999).

In face-to-face interaction, 'gates' such as physical unattractiveness, a stammer, shyness or being from a different age group or social background can prevent relationships from starting. Online these gates are removed, so people focus on similarity and self-disclosure, which widens the range of potential relationships.

There is supporting evidence for the benefits of the absence of gating.

McKenna and Bargh (2000) found that relationships which began online were often stable and durable over time. Baker and Oswald (2010) found that shy people who used Facebook more reported better quality friendships, suggesting social media helps people who find face-to-face interaction difficult and may reduce loneliness.

However, reduced cues theory has been challenged because non-verbal communication is not absent online, only different. Emoticons and acronyms substitute for facial expressions and intonation, and Walther and Tidwell (1995) showed that the timing of messages conveys meaning, for example a fast reply to a social message signals intimacy. This suggests people adapt to the medium, so cues are reduced less than the theory claims.

A further issue is that much of this research was carried out in the 1990s, when communication was mainly text-based. Modern social media such as Facebook and Instagram relies heavily on photographs and live video calls, so gates such as physical attractiveness are partly restored and selective self-presentation now focuses on images. The findings may therefore lack

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temporal validity and need updating as technology changes.

The effects of social media also depend on context and culture. People disclose more on gaming sites and forums than on dating sites, where a face-to-face meeting is expected, so a single theory cannot explain all virtual relationships. Yum and Hara (2005) found that the link between self-disclosure and relationship development differed between Korean, Japanese and American users, suggesting the theories are culturally biased towards Western individualist users.

Finally, there may be negative consequences: heavy reliance on virtual relationships may reduce face-to-face communication skills such as reading non-verbal cues. Overall, research shows virtual relationships are not simply weaker versions of face-to-face ones, but their nature depends on the platform, the individual and the culture.

Question number	
	<i>Section B: Gender</i>
<i>11</i>	<i>A and D</i>
<i>12</i>	<i>Bem, S. L. (1993). The lenses of gender: Transforming the debate on sexual inequality. New Haven: Yale University Press.</i>
<i>13</i>	<i>Ben is male, so he has Klinefelter's syndrome, a chromosomal disorder in which a male has an extra X chromosome (XXY). His 'problems at school' fit the typical psychological features, such as poorer language and reading skills, memory problems and being passive or shy. The 'physical differences' could include being taller with long limbs, small testes, little facial and body hair and some breast development at puberty.</i>
	<i>Dido is female, so she has Turner's syndrome, a chromosomal disorder in which a female has only one X chromosome (XO, 45 chromosomes). Doing better at schoolwork fits the higher than average reading and verbal ability often found, although spatial and mathematical skills are usually weaker. The noticeable physical differences include short stature, a webbed neck, no breast development or menstruation at puberty and infertility.</i>
<i>14</i>	<i>Atypical gender development includes gender dysphoria (gender identity disorder), where there is a mismatch between a person's biological sex and their psychological experience of themselves as male or female, causing significant distress. Research has investigated both biological and social explanations.</i>
	<i>Genetic research suggests gender dysphoria is partly inherited. Coolidge et al. (2002) studied twins and estimated that around 62% of the variance in gender identity disorder was due to genetic factors. Hare et al. (2009)</i>

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number

found that male-to-female transsexuals were more likely to have a longer version of the androgen receptor gene, which may reduce the action of testosterone and under-masculinise the brain.

Brain-sex theory argues that the brains of transgender people are structurally more like those of their identified gender. Zhou et al. (1995) found in post-mortem studies that the BSTc, a region of the hypothalamus that is usually larger in males, was female-sized in male-to-female transsexuals. Garcia-Falgueras and Swaab (2008) found a similar pattern in another hypothalamic nucleus. Abnormal levels of prenatal hormones may also affect brain development in the womb.

Social explanations include Rekers (1995), who found that gender dysphoric boys often lacked a stereotypical male role model to identify with and imitate, and the psychoanalytic view (Stoller) that extreme separation anxiety and an overly close relationship with the mother lead the boy to identify with her. Cognitive explanations suggest some children develop non sex-typed gender schemas.

However, there is counter-evidence to the biological explanations. Chung et al. (2002) found that differences in BSTc volume do not appear until adulthood, yet most transgender adults report feeling gender dysphoria from early childhood, so the BSTc difference may be an effect rather than a cause. Also, many individuals in Zhou's study had received hormone treatment, which could have changed the size of the BSTc, so cause and effect cannot be established.

Furthermore, Gladue (1985) found few hormonal differences between gender dysphoric individuals and other men, and Zucker (2008) found that for the majority of children gender dysphoria is transient and lasts only a few years. If the cause were purely biological, we would expect it to be stable, which suggests environmental factors also play a role.

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The social explanations are also limited. Psychoanalytic theory cannot explain atypical gender development in females, and its concepts are difficult to test empirically. Rekers' findings are correlational, so it is unclear whether a lack of a male role model causes atypical development. Cultural evidence, such as the recognition of a third gender in some societies, suggests that what counts as atypical is partly socially constructed, which questions purely biological accounts. Overall, the research supports an interactionist approach in the nature versus nurture debate: genetic and brain factors may create a predisposition, which interacts with social experiences. Biological explanations are reductionist and deterministic, although they can reduce stigma by showing that gender identity is not simply chosen. This is a socially sensitive area, so findings must be interpreted carefully, especially given increasing acceptance of gender identities outside the traditional male and female dichotomy.

Question number	
	<i>Section B: Cognition and development</i>
15	<i>C and E</i>
16	<i>Selman, R. L. (1980). The growth of interpersonal understanding: Developmental and clinical analyses. New York: Academic Press.</i>
17	<i>Piaget proposed that children build schemas, mental frameworks of knowledge about objects and actions, and develop them through adaptation. In assimilation, new information is fitted into an existing schema. Billy is assimilating: he applies his existing sucking (mouthing) schema to every new object, including the rattle, so he treats everything as something to eat.</i>
	<i>When an existing schema does not fit experience, disequilibrium results, and the child restores equilibrium (equilibration) through accommodation, changing a schema or forming a new one. Milo has experienced that some objects rattle and others do not, so he has accommodated by forming a new, separate rattle (shaking) schema distinct from his sucking schema.</i>
18	<i>Baillargeon investigated infants' knowledge of the physical world, particularly object permanence. Piaget claimed object permanence develops at around eight months, based on whether infants searched for hidden objects. Baillargeon argued that this underestimated infants, because searching requires motor skills, so she developed the violation of expectation (VOE) paradigm, which uses looking time rather than reaching. In VOE studies infants are first habituated to an event. They are then shown a possible event and an impossible event, which violates a physical law. If they look longer at the impossible event, this is taken as surprise,</i>

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number

showing that they expected the object to continue to exist. In the drawbridge study (Baillargeon, Spelke and Wasserman, 1985), five-month-olds looked longer when a screen appeared to rotate through the space occupied by a hidden box. Baillargeon and DeVos (1991) showed infants of three and a half months a tall and a short carrot moving behind a screen with a window; they looked longer when the tall carrot failed to appear in the window.

Aguiar and Baillargeon (1999) found similar results with infants as young as two and a half months using a toy mouse passing behind screens.

From this, Baillargeon proposed that infants have an innate physical reasoning system (PRS), which provides core knowledge about objects.

Infants then learn about categories of events, such as occlusion, containment and support, and variables such as height are learned for each category at different ages.

Baillargeon's research is an important challenge to Piaget. It suggests object permanence is present several months earlier than he claimed, and that Piaget confused infants' lack of motor ability with lack of understanding. The VOE method controls for this by measuring looking, which even very young infants can do, and the tightly controlled experiments allow cause and effect to be inferred.

However, the interpretation of looking time is controversial. Looking longer may not mean surprise or understanding at all. Cashon and Cohen (2000) argued that infants may simply be attracted to novel or more engaging stimuli, and Schöner and Thelen (2004) argued that infants detect a perceptual difference between displays rather than a violation of physical laws. The research therefore relies on inference, and a 'rich' interpretation may overestimate infants' knowledge.

There is also a difference between knowing that an object exists and

Question
number

being able to act on that knowledge. Piaget's definition of object permanence involved searching for objects, so Baillargeon may have measured a different, more basic ability. Both views may be valid, since infants could have implicit knowledge before they can use it to guide action.

Baillargeon's view of an innate physical reasoning system has wider implications for the nature versus nurture debate. It parallels other nativist theories, such as Chomsky's innate language acquisition device, and has evolutionary value, since pre-programmed expectations allow rapid learning and attention to unusual events aids survival. However, the infants tested were at least two and a half months old, not newborns, so they could already have learned about objects through experience, meaning the abilities may not be innate.

Overall, Baillargeon's research has told us that infants appear to understand far more about the physical world, and much earlier, than Piaget believed, but the conclusions depend on how looking time is interpreted, so they should be treated with some caution.

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	<i>Section C: Schizophrenia</i>
<i>19</i>	<i>B</i>
<i>20</i>	<i>C</i>
<i>21</i>	<i>The family dysfunction explanation argues that schizophrenia results from dysfunctional patterns of interaction in the family, such as conflict, communication problems, criticism and control. Fromm-Reichmann proposed the schizophrenogenic mother, who is cold, rejecting and controlling, creating a family climate of tension and secrecy. This leads to distrust that later develops into paranoid delusions. The father in such families is often passive.</i> <i>Bateson et al. (1956) proposed the double-bind theory: the child receives contradictory messages from a parent, so whatever they do is wrong, and they are punished by withdrawal of love. The child cannot comment on the contradiction, which leads to a confused, disorganised view of the world. Expressed emotion (EE) refers to high levels of criticism, hostility and emotional over-involvement towards the patient, which acts as a stressor that can trigger onset or relapse.</i> <i>Jack's experiences fit this explanation. His mother 'fussed over' him all the time, showing emotional over-involvement and control, typical of high EE and the schizophrenogenic mother. 'One minute she seemed all affectionate and the next minute she would make nasty comments' is a double bind: Jack received mixed messages, so he 'could never please her' and did not know how to behave, which could cause the confusion seen in schizophrenia. The 'nasty comments' show criticism and hostility, another feature of high EE. 'I could never talk to mum' shows communication</i>

Question number	problems, the 'arguments' show family conflict, and his dad 'stayed out of it', showing the passive father.
22	One limitation is that the evidence cannot establish cause and effect. Most evidence comes from patients and families reporting childhood experiences retrospectively, and their recall may be inaccurate or distorted by the need to explain the illness. Prospective evidence is rare. Also, family dysfunction may be a result of the child's disturbing behaviour before diagnosis rather than its cause; Jack's mother's criticism could be a reaction to his early symptoms. However, expressed emotion is a robust predictor of relapse, so family factors may still be important in maintaining the disorder. A second limitation is that the explanation is socially sensitive and ignores strong biological evidence. Blaming parents, especially mothers, for their child's illness causes guilt and stress and may damage relationships with the people best placed to support the patient. Twin studies, such as Gottesman (1991), show a much higher concordance for MZ than DZ twins, and the dopamine hypothesis is supported by drug evidence. This suggests family dysfunction is at most a stressful trigger in a diathesis-stress model, not the main cause.
23	Typical antipsychotics, such as chlorpromazine, are dopamine antagonists. They block dopamine (D2) receptors at the synapse, especially in the mesolimbic pathway, reducing dopamine activity. This reduces positive symptoms such as hallucinations and delusions, and they also have a sedative, calming effect. Atypical antipsychotics, such as clozapine and risperidone, block dopamine receptors more temporarily and also act on other neurotransmitters, such

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as serotonin. They aim to reduce positive and negative symptoms, such as avolition, with fewer side effects.

There is evidence that antipsychotics are effective. Thornley et al. (2003) reviewed studies comparing chlorpromazine with a placebo and found it was associated with better overall functioning and reduced symptom severity, and relapse rates are lower in patients who keep taking medication. By reducing symptoms, drugs allow many patients to live outside institutions, improving quality of life for patients and families and reducing the economic cost of hospitalisation.

However, antipsychotics have serious side effects. Typical antipsychotics can cause dry mouth, weight gain and tardive dyskinesia, involuntary facial movements, which can be permanent. Clozapine can cause agranulocytosis, so patients need regular blood tests. Side effects lead many patients to stop taking the medication, reducing effectiveness in real life. Many studies also only assess short-term effects, so long-term benefits are less certain. There are also ethical concerns that drugs act as a 'chemical straitjacket', calming patients without addressing the cause. Drugs treat symptoms rather than causes, so combining them with psychological therapies such as CBT or family therapy may be more effective than drugs alone.

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	<i>Section C: Eating behaviour</i>
24	<i>A</i>
25	<i>C</i>
26	<i>Family systems theory (Minuchin et al., 1978) proposes that anorexia nervosa arises from dysfunctional patterns of interaction within a 'psychosomatic family'. Enmeshment means family members are over-involved in each other's lives, with no clear emotional boundaries, so the child has little sense of individuality. Overprotectiveness means members are extremely concerned for each other's welfare, which stifles autonomy. Rigidity means interactions are fixed and the family denies any need to change. Conflict avoidance means disagreements are suppressed rather than resolved.</i> <i>In such a family, the adolescent lacks autonomy and control, so controlling what she eats becomes the one area of choice available to her, and the illness can draw attention away from family conflict.</i> <i>Mia's experiences can be clearly linked to this. 'Mum worries about me constantly and I worry about her', and they 'swap clothes and make-up', show enmeshment, with no clear boundary between mother and daughter. Her mum 'is always asking me if I'm OK', 'wants to know everything I do' and 'listens in' on the phone, showing overprotectiveness, while 'she spends all her time thinking about me' suggests a self-sacrificing parent. 'It has always been the same' shows rigidity, and 'we never argue' shows conflict avoidance. With so little autonomy, Mia may use restricting food to gain control.</i>

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27	One limitation is that the theory cannot establish cause and effect. Enmeshment and overprotectiveness may be a result of the anorexia rather than its cause: parents naturally become more watchful and involved when a child is seriously ill, so Mia's mother's monitoring could be a reaction to her illness. Evidence is also usually self-reported and retrospective, so families' reports may be distorted by emotion and the need to explain. A second limitation is that the evidence is inconsistent and alternative explanations may be better. Some studies have found no differences in enmeshment between families with and without an eating disorder, so it is not a reliable feature. Twin studies (Holland et al., 1984) show much higher concordance for MZ than DZ twins, suggesting a genetic cause, so family interactions may only act as a trigger. The theory also cannot explain why incidence has increased over time without corresponding changes in families, and blaming parents may cause guilt and stress.
28	The evolutionary explanation argues that food preferences are adaptive because they helped our ancestors survive and reproduce, so genes for them were passed on. A preference for sweet foods ensured ancestors ate high-energy ripe fruit, a preference for fatty foods provided calories, and a preference for salt is essential for cell function. Bitter and sour tastes are avoided because they signal poisons or rotting food. Neophobia, avoiding unfamiliar foods, reduced the risk of poisoning, and biological preparedness (Seligman) means humans rapidly learn taste aversions after illness. There is evidence that some preferences are innate. Desor et al. (1973) found that newborns preferred sweet solutions, and Steiner (1977) showed newborns made positive facial expressions to sweet tastes and rejection expressions to bitter ones before any learning. Garcia et al. (1966) showed rats rapidly learned to avoid a sweet liquid paired with sickness, supporting

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preparedness.

However, learning plays an important role. Birch and Marlin (1982) found that neophobia reduces with repeated exposure, and there are large cultural differences, such as the enjoyment of hot chilli in Mexico, which an innate aversion to burning tastes cannot explain. Individual differences also contradict universal evolved preferences, as only some people can taste the bitter chemical PROP (Drewnowski, 2001).

The explanation also helps explain obesity: evolved preferences for sweet and fatty foods were adaptive when food was scarce but are maladaptive in modern environments where such foods are plentiful. Nevertheless, it is difficult to test, as explanations are often post hoc, so an interactionist approach combining evolution and learning is more convincing.

Question number	
	<i>Section C: Stress</i>
29	D
30	D
31	<i>Stress inoculation therapy (SIT), developed by Meichenbaum, is a cognitive behavioural therapy based on the idea that stress is caused by the way we think about stressors, so changing thoughts changes the emotional response. Like a vaccination, it prepares people to cope before they meet stressors. There are three phases. In conceptualisation, the client and therapist identify stressors and the negative thoughts they trigger, and the client learns to see stressors as problems to be solved. In skill acquisition and rehearsal, the client learns coping skills such as relaxation, positive self-talk and social skills. In application and follow-through, the skills are practised in role play and visualisation, then used in real situations, with setbacks seen as learning opportunities.</i> <i>In conceptualisation, Wally would identify his negative thoughts, such as 'I'm not good enough for the job', 'my workmates laugh at me' and 'my supervisor will tell me off', and recognise that these thoughts, not work itself, cause his stress. In skill acquisition, he would learn to catch these thoughts as they occur and replace them with positive self-statements, such as 'I'm as good as anyone at this job' and 'my supervisor knows I work hard'. He could learn breathing exercises to use before work and relaxing imagery to help him sleep, and social skills for talking to workmates. In application, he would rehearse talking to his supervisor in role play with the therapist, then gradually approach his supervisor and workmates at work, building confidence with booster sessions.</i>

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32	A strength of SIT is that there is evidence it is effective and long-lasting. Saunders et al. (1996) carried out a meta-analysis of 37 studies and found SIT reduced anxiety and improved performance under stress. Because it teaches skills that can be used for future stressors, it 'inoculates' people, so the benefits continue after therapy ends, and it is flexible, as it can be adapted to almost any stressor and delivered to individuals or groups. A limitation is that SIT requires a great deal of time, effort and motivation. Clients must attend many sessions and practise skills, so those who are highly stressed or lack commitment, such as someone who avoids situations like Wally, may drop out, limiting its usefulness. It is also expensive, and because it combines many components, it is unclear which part is responsible for its effects, so it could perhaps be shortened.
33	The Social Readjustment Rating Scale (SRRS) was developed by Holmes and Rahe (1967). It lists 43 life events, each given a number of life change units (LCUs) according to how much readjustment it requires, from death of a spouse (100) to minor violations of the law (11); marriage was set at 50. Respondents tick events experienced over a set period, such as the past year, and the LCUs are added to give a total score. The Hassles and Uplifts Scale (Kanner et al., 1981) lists 117 daily hassles and 135 uplifts; respondents indicate which occurred in the last month and rate their severity. There is supporting evidence that these scales measure stress linked to illness. Rahe et al. (1970) found a positive correlation between SRRS scores and illness in US Navy personnel. However, this is correlational, and illness could cause life events such as job loss rather than the other way round.

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The SRRS has validity problems. Some events are ambiguous: marital separation scores highly but may be a relief for some people. It also does not distinguish positive from negative events or take account of individual differences such as hardiness. As events are recalled retrospectively, recall may be inaccurate, reducing reliability.

Hassles may be a better measure of everyday stress. DeLongis et al. (1982) found that daily hassles were a stronger predictor of health problems than major life events, although a combined measure gives a fuller picture as life events may increase hassles. Self-report scales are also subjective, so combining them with objective physiological measures such as cortisol levels would increase validity.

Question number	
	<i>Section D: Aggression</i>
34	<i>Aggressive images in the media, such as guns or violent acts in films and games, act as priming cues that activate related aggressive scripts, schemas and memories stored in the viewer's memory. When the person later meets similar cues in a real situation, these primed scripts are more easily triggered, so they are more likely to reproduce that specific aggressive act or behave more aggressively in general.</i>
35	<i>Primary data is collected first-hand by the researcher directly from participants, specifically for the aim of the current investigation. Secondary data has already been collected by someone else, such as another researcher or an official body, for a different purpose, and is then used by the researcher.</i> <i>In this investigation, the interview recordings are primary data, because the psychologist gathered them herself from the teenagers specifically to investigate causes of aggressive behaviour. The school reports are secondary data, because they already existed, were written by teachers, and were not produced to investigate causes of aggression.</i>
36	<i>She would transcribe the interview recordings and read the transcripts repeatedly, then code the data by labelling meaningful sections. She would review the codes to identify recurring themes emerging from the data that might be linked to later aggression, such as family violence or parental arguments.</i>
37	<i>Evolutionary explanations argue that aggression evolved because it was adaptive, increasing an individual's survival and reproductive success.</i>

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Through natural selection, ancestors who behaved aggressively were better able to compete for resources such as food, territory and mates, so they reproduced more and genes for aggressive behaviour were passed on to later generations.

One key explanation is sexual jealousy. Males face paternity uncertainty because they cannot be sure a child is theirs, and cuckoldry means investing resources in another man's offspring, which is a major reproductive cost. Male sexual jealousy therefore evolved to prevent infidelity. Wilson and Daly (1996) described mate retention strategies, including direct guarding, such as monitoring a partner's whereabouts, and negative inducements, such as threats of violence if she is unfaithful, both linked to aggression.

Aggression can also increase status and access to mates. Dominant, aggressive males gain resources and position in social hierarchies, and females may prefer such males because they can provide and protect, so aggression is selected through sexual selection. This also explains why males are generally more physically aggressive than females, as females' reproductive success depends more on survival to care for offspring, so they favour less risky indirect aggression.

There is supporting evidence. Shackelford et al. (2005) found a positive correlation between men's use of mate retention strategies and violence against their partners, as reported by women. Sadalla et al. (1987) found that women rated men behaving dominantly as more attractive. Wilson and Daly also reported that sexual jealousy is a leading motive in spousal homicide.

However, the evidence is largely correlational, so cause and effect cannot be established. Many studies rely on self-reports of jealousy and violence, which may be affected by social desirability bias, and it is impossible to

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test directly how behaviour evolved, so explanations may be post hoc and difficult to falsify.

Cultural differences also challenge the explanation. Levels and forms of aggression vary greatly between societies, and some groups, such as the !Kung San, show very little physical aggression. If aggression were an evolved, universal adaptation, we would expect less variation, so social learning theory, which explains aggression through observation and vicarious reinforcement, may account for cultural differences better.

The explanation also struggles to explain why aggression persists when it is maladaptive. Violence towards a partner may drive her away, and aggression carries risks of injury, death and rejection by the group, all of which reduce reproductive success. This suggests aggression is only adaptive in specific circumstances.

The approach can also be criticised as biologically deterministic and reductionist, reducing complex behaviour to genes and ignoring free will and social factors. This raises ethical concerns: if male violence is seen as evolved, it might be used to excuse domestic violence. Overall, an interactionist approach, where evolved tendencies are triggered or suppressed by environmental and cultural factors, is the most convincing account of human aggression.

Question number	
	<i>Section D: Forensic psychology</i>
38	<i>In the top-down approach (developed by the FBI), the profiler starts with pre-existing categories of offender, organised and disorganised. Evidence from the crime scene and details of the victim and attack are then used to decide which category the offender fits, which predicts his likely characteristics and helps narrow the search.</i>
39	<i>Primary data is collected first-hand by the researcher directly from participants, specifically for the aim of the current investigation. Secondary data has already been collected by someone else, such as another researcher or an official body, for a different purpose, and is then used by the researcher.</i> <i>In this investigation, the interview recordings are primary data, because the psychologist gathered them herself from the offenders specifically to investigate causes of offending. The court and prison reports are secondary data, because they already existed, were produced by the courts and prison staff, and were not gathered to investigate causes of offending.</i>
40	<i>She would transcribe the interview recordings and read the transcripts repeatedly, then code the data by labelling meaningful sections. She would review the codes to identify recurring themes emerging from the data that might be linked to violent crime, such as family violence or alcohol misuse.</i>
41	<i>One cognitive explanation is level of moral reasoning, based on Kohlberg's theory. Kohlberg proposed that moral reasoning develops through three levels: pre-conventional, conventional and post-conventional. Offenders are thought to reason at the pre-conventional level, which has two stages. In</i>

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the punishment orientation, decisions are based on whether an act will be punished, and in the reward orientation, decisions are based on what can be gained. Such individuals offend if they think they can avoid punishment or will benefit.

A second explanation involves cognitive distortions, faulty and irrational ways of thinking that allow offenders to justify their behaviour. Hostile attribution bias is the tendency to misinterpret others' actions or expressions as aggressive or provocative, such as seeing a neutral look as a threat, which can trigger violence. Minimalisation is downplaying the seriousness of an offence, for example a burglar claiming 'they were insured anyway', which reduces guilt.

There is supporting evidence for the moral reasoning explanation. Palmer and Hollin (1998) found that offenders showed less mature moral reasoning than non-offenders on a sociomoral reflection measure. Thornton and Reid (1982) found pre-conventional reasoning was more common in offences involving financial gain, such as robbery, than in impulsive offences such as assault. This shows the explanation is useful but may only apply to certain types of crime.

However, Kohlberg's theory has limitations. It was based on interviews with American males, so it may be gender biased and culturally biased towards Western values. It also relied on hypothetical dilemmas, so it may not reflect how people reason in real-life situations, where emotions and peer pressure are involved. Gibbs suggested an alternative with immature and mature levels, which may fit offenders better.

There is also support for cognitive distortions. Schöenberg and Jusyte (2014) found that violent offenders were more likely than controls to perceive ambiguous facial expressions as angry, supporting hostile attribution bias. Barbaree (1991) found that many convicted rapists denied or

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minimised their offences, supporting minimalisation.

A strength of the cognitive explanations is their practical application. If offending is linked to faulty thinking, cognitive behavioural therapy can challenge these distortions and encourage offenders to take responsibility, which may reduce reoffending and benefit the economy by cutting the costs of crime.

However, cognitive explanations describe offenders' thinking rather than explaining where it comes from. They do not explain why some people develop immature moral reasoning or distortions in the first place, which may be due to nature (biological factors) or nurture (upbringing). It is also possible that distortions develop after offending, to justify it, so cause and effect is unclear.

Finally, the approach can be criticised as reductionist, as it focuses only on thought processes and ignores biological and social influences such as poverty and peers. Moral reasoning does not always predict behaviour, since people may know an act is wrong but do it anyway. A more holistic approach would combine cognitive factors with other explanations, such as differential association theory.

Question number	<i>Section D: Addiction</i>
42	<i>Nicotine binds to nicotinic receptors on neurons in the ventral tegmental area, stimulating dopamine release in the nucleus accumbens (the mesolimbic reward pathway). This creates a pleasurable, rewarding sensation, which reinforces smoking, leading to craving and repeated use.</i>
43	<i>Primary data is collected first-hand by the researcher directly from participants, specifically for the aim of the current investigation. Secondary data has already been collected by someone else, such as another researcher or an official body, for a different purpose, and is then used by the researcher.</i> <i>In this investigation, the interview recordings are primary data, because the psychologist gathered them herself from the gamblers specifically to investigate causes of gambling addiction. The debt counsellor reports are secondary data, because they already existed, were written by the counsellors, and were not gathered to investigate causes of gambling addiction.</i>
44	<i>She would transcribe the interview recordings and read the transcripts repeatedly, then code the data by labelling meaningful sections. She would review the codes to identify recurring themes emerging from the data that might be linked to later gambling addiction, such as family poverty or sensation-seeking.</i>
45	<i>Cognitive theory argues that gambling addiction results from cognitive distortions, faulty and irrational thought processes about gambling. These biases lead gamblers to overestimate their chances of winning, so they</i>

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continue despite losses.

One distortion is the illusion of control (Langer, 1975), the belief that a gambler can influence chance outcomes through skill or rituals, such as choosing their own lottery numbers. The gambler's fallacy is the belief that future outcomes depend on past ones, so after a run of losses a win is 'due'. Expectancy theory suggests problem gamblers focus on the positive outcomes of gambling and ignore the losses. Wagenaar (1988) identified other distortions, including confirmation bias, the availability heuristic and flexible attribution, where wins are attributed to skill and losses to bad luck. Self-efficacy also matters: gamblers with low self-efficacy believe they cannot resist the urge to gamble.

There is evidence supporting faulty thinking. Griffiths (1994) used a 'thinking aloud' method with fruit machine players and found that regular gamblers made more irrational verbalisations, such as talking to the machine, than non-regular gamblers, and believed they were more skilful than they were. Joukhador et al. (2003) found that problem gamblers showed more cognitive biases than social gamblers.

However, research methods raise validity issues. Thinking aloud and questionnaires rely on introspection, so gamblers may not be aware of their thought processes, or may report what they think the researcher wants. Griffiths' study took place in a real arcade, increasing ecological validity, but distortions can only be inferred, making the theory difficult to falsify. A further problem is establishing cause and effect. Cognitive biases may be a result of gambling addiction rather than a cause: a gambler may develop beliefs about skill to justify continuing after losses. The theory also does not explain why some people develop distortions in the first place, or why only some gamblers become addicted when most people show some of these biases.

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A strength is the practical application. If faulty thinking causes the addiction, cognitive behavioural therapy can correct these beliefs. Ladouceur et al. (2001) found that cognitive treatment correcting erroneous beliefs about randomness reduced pathological gambling. This has economic benefits, since it reduces debt and the costs of addiction.

However, the theory may not apply equally to all types of gambling.

Illusions of control are most relevant to games with an element of skill or choice, so it may explain sports betting better than purely chance games, suggesting the explanation is limited.

Finally, cognitive theory can be criticised for ignoring other influences.

Learning theory explains gambling through variable ratio reinforcement, and biological explanations highlight dopamine and genetic vulnerability. In the nature versus nurture debate, an interactionist approach is more complete, where biological vulnerability and learning interact with cognitive distortions.