

A-level PSYCHOLOGY

Paper 3 Issues and options in psychology

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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Outline what is meant by soft determinism.

[2 marks]

A psychologist investigated the effect of the presence of a friend on mood. She used a controlled laboratory experiment. She asked a group of participants to rate their happiness on a scale.

In **Condition 1** (Alone Condition), participants completed the scale after sitting alone in a room for 30 minutes.

In **Condition 2** (Friend Condition), the same participants completed the same scale after sitting for 30 minutes in a room with a friend.

The conditions were counterbalanced.

The psychologist analysed the results of the study using a Wilcoxon test. The analysis showed that happiness ratings were significantly higher in the Friend Condition.

0	2
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Explain **two** reasons why it was appropriate to use a Wilcoxon test in this situation. Refer to the description of the study in your answer.

[4 marks]

The psychologist claimed to have demonstrated a causal explanation for happiness.

0	3
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What is meant by a causal explanation? Explain why it was appropriate to claim that there was a causal explanation in this case.

[4 marks]

0	4
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Using an example of a research study you have learned about in psychology, outline what is meant by a nomothetic approach to psychological investigation.

[4 marks]

0	5
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Referring to the example used in your answer to Question **04**, briefly explain how **the same** behaviour might be studied using an idiographic approach to psychological investigation.

[2 marks]

There are many examples of socially sensitive research in psychology.

0	6
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Outline what social sensitivity means in the context of psychology. Explain how researchers in psychology could deal with issues related to social sensitivity.

[8 marks]

Turn over for Section B

Turn over ►

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

Chris and Sam are discussing their 15-year relationship.

Chris says, "Compared to the relationships of our friends, I think I get a good deal. I do the household jobs and you earn plenty of money. It works well."

Sam says, "It balances out. Also, it would be such a waste if we split up now. We've each put a lot of time and effort into this relationship and we have a lovely home. It could never be this good with anyone else."

0	7
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Use your knowledge of theories of romantic relationships to explain the comments made by Chris and Sam.

[8 marks]

0	8
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Discuss self-disclosure **and** the absence of gating in virtual relationships.

[16 marks]

Topic: Gender

Olga and Frank are talking about their five-year-old son, Donny.

Olga says, "Remember when he was very little and he used to say he would be a mummy when he grew up?"

Frank replies, "Now look at him at the playground. He only plays with tractors and wants to be 'a tractor man'. He has no interest in watching his sister and the other girls. He concentrates on what the other boys are doing and why."

0	9
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Use your knowledge of cognitive explanations for gender development to explain the comments made by Olga and Frank.

[8 marks]

1	0
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Discuss the role of chromosomes **and** hormones in sex and gender.

[16 marks]

Topic: Cognition and development

Leonard and Felix are primary school teachers. They discuss the methods they use in their classrooms.

Leonard says, “Children need to experiment with the right sort of task. They learn well if they make mistakes until they get it right.”

Felix says, “Children need various levels of guidance to achieve their potential. The more able children can really help the ones who are struggling.”

1	1
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Use your knowledge of theories of cognitive development to explain the comments made by Leonard and Felix.

[8 marks]

1	2
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Discuss theory of mind **and** Selman’s levels of perspective-taking in the development of social cognition.

[16 marks]

Turn over for Section C

Turn over ►

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	3
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Which of the following **best** describes the diathesis-stress model of schizophrenia?

Write the correct letter in your answer book.

[1 mark]

- A** An underlying predisposition triggers the development of schizophrenia in stressful conditions.
- B** Schizophrenia develops in people who have an underlying predisposition whether there are stressful conditions or not.
- C** Stressful conditions trigger the development of schizophrenia in people with an underlying predisposition.
- D** Stressful conditions trigger the development of schizophrenia whether people have an underlying predisposition or not.

1	4
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Tokens are sometimes used in the management of schizophrenia. Which of the following **best** describes the tokens that are used in token economies?

Write the correct letter in your answer book.

[1 mark]

- A** Something enjoyable that is presented for good behaviour.
- B** Something neutral that is presented for bad behaviour.
- C** Something neutral that is presented for good behaviour.
- D** Something unpleasant that is presented for bad behaviour.

1	5
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Outline a cognitive explanation for schizophrenia and outline **one** limitation of this explanation.

[6 marks]

Researchers studied therapies for schizophrenia. They assessed the mood of two groups of participants before the participants received therapy. The same participants were assessed again after four weeks of receiving therapy.

Group 1 (Drug therapy group) received drug therapy alone.

Group 2 (Combined therapy group) received a combination of drug therapy and cognitive therapy.

The researchers assessed mood using a standardised test of mood. A low score indicated negative mood and a high score indicated positive mood. Scores ranged from 0 to 100. The lowest score was 24 and the highest score was 83.

Table 1 shows the results of the study after four weeks of therapy.

Table 1 Mean mood scores for Group 1 (Drug therapy group) and Group 2 (Combined therapy group) after four weeks of therapy

	Group 1 (Drug therapy group)	Group 2 (Combined therapy group)
Mean mood score	36.4	60.5

1 6

Explain why the data in **Table 1** does **not** enable the researchers to draw proper conclusions about the effectiveness of therapy for the two groups. What should the researchers do about this?

[4 marks]

1 7

In this study, the mood scores were assumed to be an interval level of measurement because the test of mood was standardised.

Explain how you could convert the mood scores from this study into:

i) ordinal data

and

ii) nominal data.

[4 marks]

1 8

Evaluate antipsychotics as a therapy for schizophrenia.

[8 marks]

Turn over for the next topic

Turn over ►

Topic: Eating behaviour

1	9
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Which of the following is the **best** example of a cognitive distortion in anorexia nervosa?

Write the correct letter in your answer book.

[1 mark]

- A Believing that dieting allows you to be in control.
- B Believing that you are bigger than you really are.
- C Thinking that being thin will make you happy.
- D Thinking that people will like you more if you are thinner.

2	0
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Which of the following **best** describes enmeshment in family systems theory?

Write the correct letter in your answer book.

[1 mark]

- A Where an individual member is uncomfortable because they feel pressured by other members of the family.
- B Where an individual member of the family feels extremely attached to other members of the family.
- C Where an individual member of the family is overanxious about their family responsibilities.
- D Where an individual member of the family lacks a sense of individuality and personal identity.

2	1
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Outline the role of learning in food preference and outline **one** limitation of this explanation.

[6 marks]

Researchers studied psychological support for people on a strict diet. They assessed the mood of two groups of participants before the participants received psychological support. The same participants were assessed again after four weeks of receiving support.

Group 1 (Family support group) received family-based support.

Group 2 (Individual support group) received one-to-one support.

The researchers assessed mood using a standardised test of mood. A low score indicated negative mood and a high score indicated positive mood. Scores ranged from 0 to 100. The lowest score was 24 and the highest score was 83.

Table 2 shows the results of the study after four weeks of receiving support.

Table 2 Mean mood scores for Group 1 (Family support group) and Group 2 (Individual support group) after four weeks of receiving support

	Group 1 (Family support group)	Group 2 (Individual support group)
Mean mood score	36.4	60.5

2 2

Explain why the data in **Table 2** does **not** enable the researchers to draw proper conclusions about the effectiveness of different types of support. What should the researchers do about this?

[4 marks]

2 3

In this study, the mood scores were assumed to be an interval level of measurement because the test of mood was standardised.

Explain how you could convert the mood scores from this study into:

i) ordinal data

and

ii) nominal data.

[4 marks]

2 4

Evaluate **one or more** psychological explanations for obesity.

[8 marks]

Turn over for the next topic

Turn over ►

Topic: Stress

2	5
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Which of the following describes what happens when skin conductance is used to indicate that a person is stressed?

Write the correct letter in your answer book.

[1 mark]

- A** The level of moisture on the surface of a person's skin decreases and skin conductivity decreases.
- B** The level of moisture on the surface of a person's skin decreases and skin conductivity increases.
- C** The level of moisture on the surface of a person's skin increases and skin conductivity decreases.
- D** The level of moisture on the surface of a person's skin increases and skin conductivity increases.

2	6
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Which of the following statements about the hypothalamic pituitary-adrenal (HPA) system is correct?

Write the correct letter in your answer book.

[1 mark]

- A** It involves the release of adrenocorticotrophin hormone from the adrenal gland.
- B** It involves the release of adrenocorticotrophin hormone from the adrenal medulla.
- C** It involves the stimulation of the adrenal cortex to produce corticosteroids.
- D** It involves the stimulation of the adrenal medulla to produce adrenaline.

2	7
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Outline life changes as a source of stress and outline **one** limitation of life changes as a source of stress.

[6 marks]

Researchers studied therapies for stress. They assessed the mood of two groups of participants before the participants received therapy. The same participants were assessed again after four weeks of receiving therapy.

Group 1 (Drug therapy group) received drug therapy alone.

Group 2 (Combined therapy group) received a combination of drug therapy and stress inoculation therapy.

The researchers assessed mood using a standardised test of mood. A low score indicated negative mood and a high score indicated positive mood. Scores ranged from 0 to 100. The lowest score was 24 and the highest score was 83.

Table 3 shows the results of the study after four weeks of therapy.

Table 3 Mean mood scores for Group 1 (Drug therapy group) and Group 2 (Combined therapy group) after four weeks of therapy

	Group 1 (Drug therapy group)	Group 2 (Combined therapy group)
Mean mood score	36.4	60.5

2 8

Explain why the data in **Table 3** does **not** enable the researchers to draw proper conclusions about the effectiveness of therapy for the two groups. What should the researchers do about this?

[4 marks]

2 9

In this study, the mood scores were assumed to be an interval level of measurement because the test of mood was standardised.

Explain how you could convert the mood scores from this study into:

i) ordinal data

and

ii) nominal data.

[4 marks]

3 0

Evaluate drug therapy as a way of managing stress.

[8 marks]

Turn over for the Section D

Turn over ►

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 | 1 | Outline the effects of computer games on aggression. | [4 marks] |
| | | | |
| 3 | 2 | Briefly evaluate the effects of computer games on aggression. | [4 marks] |
| | | | |
| 3 | 3 | Discuss the influence of genetic factors in aggression. | [16 marks] |
-

Topic: Forensic psychology

- | | | | |
|----------|----------|--|-------------------|
| 3 | 4 | Outline the bottom-up approach to offender profiling. | [4 marks] |
| | | | |
| 3 | 5 | Briefly evaluate the bottom-up approach to offender profiling. | [4 marks] |
| | | | |
| 3 | 6 | Discuss psychodynamic explanations of offending. | [16 marks] |

Topic: Addiction

- | | | | | |
|---|---|---|---|-------------------|
| <table border="1"><tr><td>3</td><td>7</td></tr></table> | 3 | 7 | Outline the theory of planned behaviour. | [4 marks] |
| 3 | 7 | | | |
| <table border="1"><tr><td>3</td><td>8</td></tr></table> | 3 | 8 | Briefly evaluate the theory of planned behaviour. | [4 marks] |
| 3 | 8 | | | |
| <table border="1"><tr><td>3</td><td>9</td></tr></table> | 3 | 9 | Discuss risk factors in the development of addiction. | [16 marks] |
| 3 | 9 | | | |

END OF QUESTIONS

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Section A

01

Soft determinism is the view that behaviour, actions and traits are to an extent governed by internal forces (e.g. genes, cognitive schemas) and external forces (e.g. upbringing, the situation), but that despite these influences people still have some free will and conscious control over how they behave within these constraints, as in the cognitive approach.

02

First, the design was repeated measures (related). The same participants completed the happiness scale in both the Alone Condition and the Friend Condition, so the two sets of scores are related, and the Wilcoxon test is used for related data.

Second, the data were ordinal. Participants rated their happiness on a rating scale, so the scores can be ranked from high to low but the intervals between points are not equal or of a fixed size (one person's '7' may not equal another's), and the Wilcoxon test is used with ordinal data. The psychologist was also looking for a difference in happiness between the two conditions, which the Wilcoxon test assesses.

03

A causal explanation is based on the scientific notion that behaviour is caused or determined by internal or external factors, so there is a cause and effect relationship between a variable (cause) and a behaviour (effect). It was appropriate here because this was a controlled laboratory experiment. The only thing that changed between conditions was the IV (sitting alone vs with a friend); extraneous variables such as the room, the 30 minutes and the same scale were controlled, the same participants took part in both conditions and counterbalancing controlled order effects. As there was a significant effect on the DV (higher happiness ratings in the Friend Condition), the change in happiness can be attributed to the presence of the friend.

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04

A nomothetic approach involves studying a large sample of participants and using the findings to establish general laws or models of behaviour that can be generalised to the wider population and used to make predictions.

For example, Milgram (1963) tested a sample of 40 male volunteers who were told to give increasing electric shocks to a 'learner'. Since 65% obeyed to the maximum 450 volts, he used the findings from this sample to propose a general theory of situational obedience (agentic state theory) that applies to people in general, predicting that most people will obey a legitimate authority figure.

05

Obedience could be studied using a case study of one individual, such as an in-depth unstructured interview with a single person who obeyed (or disobeyed) a destructive order, exploring their unique thoughts, feelings and life history to understand why they personally obeyed.

06

Socially sensitive research is research where there are potential social consequences or implications, either directly for the participants or for the group of people represented by the research (Sieber and Stanley, 1988). For example, findings may lead to prejudice and discrimination against a group, or may change public policy: Bowlby's maternal deprivation research was used to argue that mothers should stay at home, negatively affecting women, and IQ research in the 1950s influenced the 11-plus and selective education.

Researchers can deal with these issues in several ways. Firstly, they should submit research proposals to an ethics committee and abide by its recommendations. The committee can carry out a cost-benefit analysis, so the research only goes ahead if the benefits to society (e.g. better understanding of a disorder) outweigh the potential costs to the group studied.

Secondly, following Sieber and Stanley, researchers should take care when

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framing the research question so that it does not misrepresent or stereotype a group. For example, framing research on 'the causes of homosexuality' implies it is abnormal, so a more value-free question should be chosen.

Thirdly, researchers should be alert to the possible misuse of their findings. They should present results in a value-free way, explain the limitations (e.g. correlation is not causation) and avoid sensational media coverage, and consider the wider effects of publication as part of the peer review process.

Finally, they should consider participants' reactions, protecting confidentiality and dealing with ethical issues such as informed consent and right to withdraw in the design, because participants from sensitive groups may be more vulnerable.

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07

Section B: Relationships

Chris's comments can be explained by social exchange theory (Thibaut and Kelley, 1959). This suggests partners try to maximise rewards and minimise costs, and a relationship is satisfying when the rewards outweigh the costs, a 'profit'. Chris sees doing the household jobs as a cost but the money Sam earns as a reward, and his statement that 'it works well' shows he is in profit.

Chris also uses his comparison level (CL). By comparing his relationship with 'the relationships of our friends' he judges that he gets 'a good deal', so his outcomes exceed his CL and he is satisfied.

Sam's comment that 'it balances out' fits equity theory (Walster et al., 1978). This argues that fairness matters more than profit: satisfaction is highest when the ratio of rewards to costs is similar for both partners, so neither is over-benefited nor under-benefited. Sam feels Chris's housework and Sam's earnings are equal contributions, so there is no distress from inequity.

Sam's view that splitting up 'would be such a waste' reflects Rusbult's investment model (1983). Commitment depends on satisfaction, comparison with alternatives and investment size. Sam describes intrinsic investments ('time and effort' over 15 years) and extrinsic investments (their 'lovely home'), which would be lost if they split up, increasing commitment.

Finally, Sam's claim that 'it could never be this good with anyone else' shows a low comparison level for alternatives (CL_{alt}), a concept from both social exchange theory and the investment model. Because Sam believes no alternative partner would provide better outcomes, Sam is likely to stay committed.

08

Self-disclosure means revealing personal information about yourself to a partner. Online, self-disclosure tends to happen more quickly and to a greater depth than face-to-face. Anonymity makes people feel less vulnerable, similar

to the 'strangers on a train' effect (Rubin, 1975) where people disclose intimate details to someone they will never meet again.

Walther's (1996) hyperpersonal model argues that virtual relationships can become more intimate than face-to-face ones because self-disclosure is faster and more intense. Sender and receiver engage in selective self-presentation: in asynchronous communication such as email, the sender has time to choose what to reveal and present an idealised self. In contrast, Sproull and Kiesler's (1986) reduced cues theory argues that the lack of non-verbal cues (e.g. facial expression, tone) causes de-individuation, leading to disinhibition, which can mean blunt or aggressive communication.

Gating refers to features that act as 'gates' (barriers) preventing relationships forming in face-to-face situations, such as physical unattractiveness, a stammer, shyness, social awkwardness or physical distance. Online, these gates are absent, so people can form relationships based on what they say (self-disclosure) rather than how they look or behave, and the focus shifts to shared interests and personality.

There is research support for higher self-disclosure online. Joinson (2001) found that participants disclosed significantly more information about themselves in computer-mediated discussions than in face-to-face ones, and more still when they were visually anonymous. This supports the hyperpersonal model's claim that anonymity increases disclosure. However, reduced cues theory predicts less effective communication online, which contradicts this, although reduced cues theory may ignore that people use substitute cues such as emoticons, acronyms and the timing of replies to convey emotion, so cues are not truly absent.

There is also support for the absence of gating. McKenna and Bargh (1999) found that lonely and socially anxious people were more able to express their 'true self' online and formed close relationships there, many of which lasted over two years. This shows that removing gates allows people who would

normally be screened out to disclose and build relationships, demonstrating how the two concepts interact: those who are socially awkward have a stronger need to self-disclose because they cannot normally do so face-to-face.

However, the absence of gating has negative effects. Because physical gates are removed, individuals can more easily misrepresent themselves, for example lying about age, appearance or occupation on dating sites (as in 'catfishing'). Selective self-presentation may therefore lead to disappointment when partners meet face-to-face, which challenges the hyperpersonal model's optimism that online relationships are better. Increased disclosure can also be negative: too much, too early can be off-putting and can make people vulnerable to manipulation.

A further issue is that these theories do not distinguish between types of virtual interaction. Disclosure in a chat room, where people never expect to meet, may differ from disclosure on a dating site, where a face-to-face meeting is likely and people are therefore more cautious and more honest.

Online and offline relationships also increasingly overlap, as most people now use social media to maintain existing offline relationships, so theories treating virtual relationships as a separate category may be oversimplified and lack temporal validity.

Overall, self-disclosure and the absence of gating together help explain how virtual relationships can become intimate quickly, but their effects depend on the individual, the context and the type of platform.

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09

Section B: Gender

Cognitive explanations argue that children's understanding of gender develops with age through maturation, as their thinking becomes more complex. This explains why Donny's ideas changed from when he was 'very little' to age five.

According to Kohlberg's (1966) theory, at around 2 to 3 years children reach gender identity: they can label their own sex correctly but do not realise gender is fixed. This explains why Donny, when very little, said he would be 'a mummy' when he grew up, because he lacked gender stability.

At about 4 years children reach gender stability, understanding that their gender stays the same over time. Now Donny wants to be 'a tractor man', showing he understands he will grow up to be a man. He is moving towards gender constancy (around 6 years), when he will realise gender is also consistent across situations, such as wearing different clothes.

Martin and Halverson's (1981) gender schema theory suggests that once a child has basic gender identity (around 2 to 3 years) they actively seek information to build their in-group schema about their own gender. Donny's interest in what 'the other boys are doing and why' shows he is developing his in-group schema, and playing with tractors fits his schema of 'boy' activities. He has 'no interest in watching his sister and the other girls' because girls are his out-group, so information about them is ignored and is not relevant to his schema.

Donny's attention to why the other boys behave as they do, as he socialises in the playground, also reflects reduced egocentrism, as cognitive theory suggests he is beginning to consider other people's points of view and motives.

10

Chromosomes determine biological sex. The 23rd pair is XX in females and XY in males. The Y chromosome carries the SRY gene, which causes the development of testes in the embryo; these produce testosterone, which

leads to male sexual characteristics. Without SRY, ovaries develop.

Hormones influence both sex and gender. Testosterone controls male development and is linked to aggression and visuo-spatial skills, and may cause the sexually dimorphic nucleus (SDN) in the hypothalamus to be larger in males. Oestrogen determines female characteristics and the menstrual cycle, and has been linked to emotional behaviour such as premenstrual syndrome. Oxytocin is higher in females and is thought to promote nurturing, trust and the 'tend and befriend' response to stress (Taylor, 2000).

Atypical chromosome patterns support the role of chromosomes. In Klinefelter's syndrome (XXY), males may show passivity, reading difficulties, lack of facial hair and extra height. In Turner's syndrome (XO), females are infertile, have shorter stature and lack breast development, but tend to have good language and reading skills.

There is research support for the role of hormones. Young et al. (1966) found that female rats given testosterone showed male-typical sexual behaviour. In humans, Berenbaum and Bailey (2003) found that girls with congenital adrenal hyperplasia (CAH), exposed to high levels of male hormones prenatally, showed more 'tomboy' behaviour and aggression and preferred male-typical toys. Van Goozen et al. (1995) found that transgender women given female hormones showed decreased aggression and visuo-spatial skill, while transgender men given testosterone showed the opposite. This suggests hormones directly influence gender-related behaviour.

However, there are problems with this evidence. Animal studies cannot easily be generalised to humans, whose gender behaviour is far more influenced by culture and cognition. CAH and transgender research uses small, atypical samples, and the behaviour of girls with CAH may also reflect parents' expectations, so environmental factors are not ruled out.

Case studies also challenge a purely biological view. David Reimer, a

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genetically male boy raised as a girl after a botched circumcision, rejected his female identity, which supports biology. However, the Batista family, genetically male children who appeared female at birth and were raised as girls, adopted male identities at puberty with little difficulty, which some argue shows the importance of culture as well as hormones. Unique cases like these are difficult to generalise.

The biological approach can also be criticised as reductionist, reducing complex gender behaviour to genes and chemicals, and ignoring social learning theory, which sees gender as a social construct learned through modelling and reinforcement. Cross-cultural research such as Mead's (1935) suggests gender roles vary between cultures, which hormones alone cannot explain. It is also deterministic: emphasising chromosomes presents gender as fixed and binary from birth, whereas gender may be better seen as a continuum. This raises social sensitivity issues, as findings could be misused to justify stereotypes (e.g. that women are naturally more emotional).

A more convincing explanation is interactionist: biological factors may create predispositions that are then shaped by social and cognitive influences, as suggested by the biosocial approach.

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11

Section B: Cognition and development

Leonard's views reflect Piaget's theory of cognitive development. Piaget saw children as 'little scientists' who learn through active exploration and discovery, which is why Leonard says children 'need to experiment'.

When children experiment and 'make mistakes', they meet information that does not fit their existing schema, creating disequilibrium, an unpleasant state. They are motivated to restore equilibrium through accommodation, changing their schema until they 'get it right'. This trial and error process is how Piaget believed learning occurs.

Leonard's reference to 'the right sort of task' reflects Piaget's idea that schema development occurs when teachers provide appropriate materials matched to the child's stage of development, encouraging discovery learning rather than direct instruction.

Felix's views reflect Vygotsky's theory, which emphasises the social and cultural context of learning. His comment that children 'need various levels of guidance' refers to scaffolding (Wood et al., 1976), where an expert provides support that is reduced as the child becomes more competent, e.g. from demonstrating, to specific prompts, to general encouragement.

His phrase 'achieve their potential' refers to the zone of proximal development (ZPD): the gap between what a child can do alone and what they could do with help. Guidance allows struggling children to reach the upper end of their ZPD.

Felix's point that 'more able children can really help the ones who are struggling' reflects Vygotsky's concept of the more knowledgeable other (MKO). The child is seen as an apprentice, and the MKO does not need to be an adult, so able peers can scaffold the learning of others, as in peer tutoring.

12

Theory of mind (ToM) is the understanding that other people have their own mental states, such as beliefs, intentions, desires and motives, which

may differ from our own. It allows us to predict and explain others' behaviour. It is investigated using 'mind reading' tasks such as false belief tasks, for example the Sally-Anne test, where a child must realise Sally will look for her marble where she left it, not where Anne moved it, and the 'reading the mind in the eyes' task. ToM is thought to develop at around age 4.

Selman investigated perspective-taking (role-taking) using interpersonal dilemmas such as 'Holly's kitten', where Holly has promised her father not to climb trees but must decide whether to climb one to rescue a friend's kitten. Children's answers about how the characters feel showed five age-related levels moving from egocentrism to understanding others' views: Level 0, egocentric (about 3 to 6 years); Level 1, social informational role-taking (6 to 8); Level 2, self-reflective role-taking (8 to 10); Level 3, mutual or third-party role-taking (10 to 12); and Level 4, societal or social and conventional system role-taking (12 onwards).

There is strong evidence for ToM. Wimmer and Perner (1983) found that most 4-year-olds passed a false belief task about Maxi and his chocolate, while most 3-year-olds failed, suggesting ToM develops at around 4.

Baron-Cohen et al. (1985) found that 85% of typically developing children and 86% of children with Down's syndrome passed the Sally-Anne task, compared with only 20% of autistic children. This suggests ToM deficits may explain the social difficulties in autism, which has practical applications in assessment and in understanding ASD.

However, false belief tasks have been criticised for lacking validity. Bloom and German (2000) argue that passing requires memory and language skills, so young or autistic children may fail for reasons other than lacking ToM.

ToM is also unlikely to be a full explanation of ASD because it cannot explain features such as restricted interests and repetitive behaviour, so alternative explanations such as weak central coherence may be needed.

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Selman's theory is supported by Selman and Byrne (1974), who gave dilemmas to children aged 4, 6, 8 and 10 and found a clear age-related increase in perspective-taking level. Gurucharri and Selman (1982) carried out a longitudinal study, following boys over several years, and found that their perspective-taking progressed through the levels in the predicted order. As longitudinal research uses the same participants, this rules out participant variables and is strong evidence for age-related change.

However, Selman's dilemmas are hypothetical, so they may measure what children say rather than how they actually behave in real social situations, lowering ecological validity. Selman also places less emphasis on social influences, although Fitzgerald and White (2003) found that parenting style was linked to children's perspective-taking, suggesting experience as well as age matters.

There are clear parallels between ToM and Selman's work: both describe a shift from egocentric thinking to understanding other minds, linking to Piaget's findings on egocentrism, and the Sally-Anne task resembles Selman's Level 1 understanding that others may have different information.

Finally, research suggests a biological basis for social cognition: mirror neurons, which fire both when we act and when we observe others acting (Rizzolatti), may underpin ToM and perspective-taking. Understanding the development of social cognition also has implications for issues such as the age of criminal responsibility, since young children may not yet fully understand others' perspectives.

Question
number*Section C: Schizophrenia**13**C**14**C**15*

Cognitive explanations argue that schizophrenia is caused by dysfunctional information processing. Frith et al. (1992) identified two types of dysfunctional thought processing. Metarepresentation dysfunction is a difficulty in reflecting on and recognising our own thoughts and behaviour as our own (a problem with metacognition). This may explain auditory hallucinations, as the person experiences their own inner speech as a voice from an external source, and delusions of control.

Central control dysfunction is an inability to suppress automatic responses while performing deliberate actions. This may explain disorganised speech and thought disorder, such as derailment and word salad, because each word triggers automatic associations that the person cannot suppress. Stirling et al. (2006) found that people with schizophrenia were much slower on the Stroop task, supporting this.

One limitation is that the cognitive explanation only describes how people with schizophrenia think: it explains the proximal origins of symptoms but not the underlying (distal) cause, which is probably biological (e.g. genes or abnormal dopamine levels). This means therapies based on it, such as CBTp, may only manage some symptoms rather than the cause. It is also better at explaining positive symptoms such as hallucinations and delusions than negative symptoms such as avolition.

16

The table only shows mean mood scores after four weeks of therapy and does not include a baseline measure from before therapy. The groups might have had different moods at the start (e.g. Group 2 may already have been higher), so we cannot tell whether either group improved. The researchers

should include each group's mean score from before therapy and compare the change.

Also, means can be distorted by extreme scores (scores ranged from 24 to 83) and no measure of dispersion is given, so the researchers should also report the standard deviation, or use the median.

17

i) To convert to ordinal data, all the mood scores would be put in order from lowest to highest and each given a rank, e.g. the highest score (83) gets rank 1, the next highest rank 2, and so on. Any equal scores share the mean of the rank places they would have occupied, so only the order matters, not the size of the gaps.

ii) To convert to nominal data, the scores would be categorised into groups according to mood, e.g. 'low mood' (scores under 40), 'moderate mood' (40 to 60) and 'high mood' (over 60), then counting how many participants fall into each category (frequency).

18

There is strong 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. Leucht et al. (2012) found that, over a year, relapse occurred in 27% of patients who stayed on antipsychotics compared with 64% given a placebo. Atypical antipsychotics such as risperidone and clozapine may be even more effective, especially for patients who do not respond to typicals, and clozapine reduces suicide risk.

Historically, antipsychotics revolutionised treatment, allowing many patients to live in the community rather than in institutions or under physical restraint. They are relatively cheap and quick compared with alternatives such as cognitive or family therapy, which benefits the economy and the NHS. Antipsychotics also make patients calmer and more able to engage with

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psychological therapies, so they work well in combination.

However, typical antipsychotics are more effective for positive symptoms such as hallucinations than for negative symptoms such as avolition and speech poverty.

Side effects are a serious problem. Typicals can cause dizziness, weight gain and tardive dyskinesia (involuntary facial movements), and the rare but potentially fatal neuroleptic malignant syndrome. Clozapine can cause agranulocytosis, requiring regular blood tests. Costs must therefore be balanced against benefits for each patient, and side effects often lead patients to stop taking their medication, resulting in relapse and a 'revolving door' pattern of hospital readmission.

Antipsychotics also only treat the symptoms rather than curing the disorder, so they may be needed long-term. Some critics argue they are used as a 'chemical cosh' to sedate patients and make them easier to manage, raising ethical concerns. Finally, the dopamine hypothesis on which they are based is itself uncertain, so we do not fully understand why they work.

Question
number*Section C: Eating behaviour*

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Food preferences are learned through experience and association. In classical conditioning, a neutral food paired with a pleasant stimulus (e.g. sweetness, or a fun social occasion) becomes liked; a food paired with illness becomes disliked, as in taste aversion. Operant conditioning also plays a role: children rewarded with praise or treats for eating vegetables are reinforced. Birch and Marlin (1982) found that the more often toddlers were exposed to a new cheese, the more they preferred it (mere exposure).

Social learning theory suggests children acquire preferences by observing and imitating models such as parents and peers, especially when they see them being rewarded. Cultural norms also shape attitudes to foods, explaining cultural differences in likes and dislikes, such as the popularity of spicy food in some cultures.

One limitation is that learning cannot explain innate food preferences.

Newborns show a preference for sweet tastes and a dislike of bitter tastes before any learning has occurred (Steiner, 1977). The evolutionary explanation better accounts for this, as a preference for sweet and fatty foods would have helped our ancestors survive by providing energy, while avoiding bitterness protected against poisons. Therefore, food preferences probably result from an interaction of innate and learned factors.

22

The table only shows mean mood scores after four weeks of support and does not include a baseline measure from before the support began. The groups might have had different moods at the start, so we cannot tell whether either type of support improved mood. The researchers should include each group's mean score from before the support programme and

compare the change.

Also, means can be distorted by extreme scores (scores ranged from 24 to 83) and no measure of dispersion is given, so the researchers should also report the standard deviation, or use the median.

23

i) To convert to ordinal data, all the mood scores would be put in order from lowest to highest and each given a rank, e.g. the highest score (83) gets rank 1, the next highest rank 2, and so on. Any equal scores share the mean of the rank places they would have occupied, so only the order matters, not the size of the gaps.

ii) To convert to nominal data, the scores would be categorised into groups according to mood, e.g. 'low mood' (scores under 40), 'moderate mood' (40 to 60) and 'high mood' (over 60), then counting how many participants fall into each category (frequency).

24

Restraint theory (Herman and Mack, 1975) suggests that restrained eating (dieting) paradoxically leads to overeating and obesity. When dieters break their diet they disinhibit and overeat, the 'what the hell' effect. There is research support: Herman and Mack found that dieters who drank a milkshake then ate more ice cream than non-dieters. Wardle and Beales (1988) found that obese women assigned to a dieting group ate more than those in exercise or control groups, supporting the paradoxical effect of restraint.

Disinhibited eating has also been linked to attachment anxiety (Wilkinson et al., 2010), suggesting emotional factors play a role, which increases the explanatory power of psychological explanations.

However, psychological explanations describe the thinking patterns associated with obesity but most do not explain the original cause: they explain why diets fail but not why people became obese in the first place. Genetic

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explanations are also needed, as twin studies show weight is highly heritable, and neural explanations such as leptin resistance can account for individual differences in appetite. An interactionist approach combining biological and psychological factors may therefore be more complete.

These explanations have practical implications: if dieting causes overeating, obese people could learn to think about food intake differently, e.g. focusing on healthy eating rather than strict restriction, which could reduce the cost of obesity to the NHS. However, emphasising psychological factors may increase stigma and blame by implying that obese people lack self-control. Finally, the explanations are deterministic and largely nurture-based, so a nature-nurture interactionist view is more appropriate.

Question
number*Section C: Stress*

25

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Life changes are major life events that require significant psychological adjustment, such as marriage, divorce or moving house. They can be positive or negative, but the effort to adjust is stressful and can lead to stress-related illness. Holmes and Rahe (1967) developed the Social Readjustment Rating Scale (SRRS), which lists 43 life events, each given a value in life change units (LCUs) according to how much readjustment it requires, e.g. death of a spouse 100 LCUs, marriage 50 LCUs and changing to a different line of work 36 LCUs. Adding the LCUs for all events in the past year gives a total score, and a high score (e.g. over 300) is said to predict illness.

One limitation is that the relationship between LCU score and illness is only correlational, so we cannot conclude that life changes cause illness; a third variable such as anxiety may cause both. Also, the SRRS ignores individual differences: the same life change can be experienced very differently, e.g. divorce may be very negative for one person but a relief for another, yet both receive the same score.

28

The table only shows mean mood scores after four weeks of therapy and does not include a baseline measure from before therapy. The groups might have had different moods at the start, so we cannot tell whether either group improved. The researchers should include each group's mean score from before therapy and compare the change.

Also, means can be distorted by extreme scores (scores ranged from 24 to 83) and no measure of dispersion is given, so the researchers should also report the standard deviation, or use the median.

29

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ii) To convert to nominal data, the scores would be categorised into groups according to mood, e.g. 'low mood' (scores under 40), 'moderate mood' (40 to 60) and 'high mood' (over 60), then counting how many participants fall into each category (frequency).

30

There is evidence that drug therapy is effective. Benzodiazepines (BZs) enhance GABA, slowing central nervous system activity, and Baldwin et al. (2013) found in a meta-analysis that BZs were significantly more effective than a placebo in reducing anxiety. Beta-blockers (BBs) block adrenaline at receptors in the heart, reducing physical symptoms of stress such as raised heart rate; Kelly (1980) found they were effective for short-term stress, e.g. in musicians, and Lindholm (2005) reviewed their use for hypertension.

Drugs are also quick and easy to use: they require little effort or time from the patient compared with stress inoculation therapy or biofeedback, which require motivation and many sessions. This makes them cheap for the NHS and suitable for people who are too stressed to engage with psychological therapy.

However, drugs have side effects, which must be balanced against benefits. BZs can cause drowsiness, memory problems and paradoxical effects such as increased aggression, and long-term use leads to dependency and withdrawal symptoms, so they are recommended for a maximum of four weeks.

Zandstra (2004) found individual differences in long-term BZ users, showing drugs do not suit everyone.

A key criticism is that drugs only treat the symptoms of stress, not the

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cause. Once the patient stops taking the drug, the stress may return because the stressor has not been dealt with. In contrast, stress inoculation therapy teaches coping skills that prevent future stress, so it may be more effective in the long term. Drug therapy is also reductionist, reducing stress to physiological arousal and ignoring cognitive appraisal of stressors.

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Section D: Aggression

31

Violent computer games may increase aggression through social learning: players observe and imitate violent models, and are directly reinforced for aggression by scoring points or moving up levels. Cognitive priming means that repeated exposure provides aggressive scripts, so players are more ready to act aggressively. Desensitisation means regular play reduces normal physiological arousal to violence; Carnagey et al. (2007) found violent game players showed lower heart rate and skin conductance when watching real violence. Bartholow and Anderson (2002) found that people who played *Mortal Kombat* gave higher-intensity noise blasts to an opponent. Anonymity in online gaming may also be disinhibiting.

32

Much research is correlational, e.g. linking amount of violent game play with aggression, so we cannot conclude that games cause aggression. A third variable may be involved: certain personality types (e.g. high trait aggression) may be attracted to violent games, so the direction of causation is unclear. Lab studies use measures such as noise blasts, which lack validity as real-life aggression. Some evidence instead supports catharsis: Kestenbaum and Weinstein (1985) found that games helped adolescent boys release aggression. However, effects appear to be consistent across cultures, which suggests they are genuine.

33

Twin studies suggest aggression has a genetic basis. Coccaro et al. (1997) found that genetic factors accounted for about 50% of the variance in direct physical aggression in adult male twins, as MZ twins showed higher concordance than DZ twins. Adoption studies also show a significant genetic element: Rhee and Waldman (2002) found in a meta-analysis that genetic influences accounted for about 41% of the variance in aggressive behaviour. The MAOA gene controls the production of the enzyme monoamine oxidase

A, which breaks down neurotransmitters such as serotonin, dopamine and noradrenaline. A low-activity variant (MAOA-L) produces less enzyme, leading to excess neurotransmitters and is linked to higher aggression and impulsivity. Brunner et al. (1993) studied a Dutch family in which many males showed violent, impulsive behaviour and had a mutation causing abnormally low MAOA levels. Animal research also supports this: mice with the MAOA gene knocked out were highly aggressive, and selective breeding of aggressive animals produces more aggressive offspring.

There is strong support from Tiihonen et al. (2015), who found that among Finnish violent offenders, those who had committed extremely violent crimes were especially likely to carry MAOA-L, suggesting a strong genetic link. However, MAOA-L is also found in many non-violent people, so it cannot be the sole cause.

Twin studies also have limitations. MZ twins are treated more similarly than DZ twins, so higher concordance may be due to a shared environment, violating the equal environments assumption. Also, much research uses animals, and extrapolating to humans is problematic because human aggression is more influenced by cognition, culture and social learning.

Brunner's findings may be unique to one family, so cannot be generalised. A diathesis-stress (interactionist) view is more convincing. Caspi et al. (2002) found that men with MAOA-L who had been maltreated as children were much more likely to be violent, whereas MAOA-L alone was not a strong predictor. This suggests genes create a predisposition that is triggered by environmental factors such as trauma, so gene-environment interaction must be considered.

The genetic explanation is also reductionist, as it oversimplifies a complex antisocial behaviour to a single gene, when around 50% of variance is environmental. It is deterministic: if aggression is genetically determined, individuals have no free will over their behaviour. This has moral and

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practical implications for the justice system: in some cases MAOA-L has been used as a defence to reduce sentences, raising questions about responsibility and blame. It could also suggest that rehabilitation is pointless, although genetic knowledge might be used to identify those at risk and offer early intervention.

Finally, evolutionary theory suggests aggressive genes may have been adaptive, increasing access to resources and mates, which explains why they persist in the gene pool. Overall, genetic factors play a significant but not exclusive role in aggression, best understood in interaction with environment.

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Section D: Forensic psychology

34

The bottom-up approach is data-driven: it uses statistical analysis of crime scene and victim data from databases to find patterns and generate a profile, rather than starting with typologies. In investigative psychology (Canter), smallest space analysis identifies behaviours that commonly occur together, and interpersonal coherence assumes offenders behave consistently at the crime scene and in everyday life. Geographical profiling uses crime locations to infer where the offender lives (centre of gravity / circle theory), distinguishing marauders, who operate near home, from commuters, who travel away from home.

35

There is support for the approach: Lundrigan and Canter (2001) found that serial killers' body disposal sites formed a centre of gravity around their home, and Canter's profile helped catch John Duffy, the 'railway rapist'. As it relies on statistics and psychological theory rather than intuition, it is more objective and scientific than the top-down approach. It can also be applied to a wide range of crimes, such as burglary, not just murder. However, success depends on accurate and detailed police records, and crime databases may be incomplete.

36

Psychodynamic explanations argue that offending results from unconscious conflicts rooted in childhood. Blackburn (1993) argued that if the superego (the moral part of personality, formed through identification with the same-sex parent at the end of the phallic stage) is inadequate, the selfish demands of the id are not controlled and offending occurs. A weak superego develops if the same-sex parent is absent, so the child cannot fully identify with them. A deviant superego develops if the child identifies with a criminal parent, internalising deviant values. An over-harsh superego is excessively punitive, producing guilt and an unconscious desire to be punished, so the person commits crimes in order to be caught.

Bowlby's maternal deprivation hypothesis argues that prolonged separation from the mother in the first two and a half years can lead to affectionless psychopathy, an inability to feel guilt or empathy, which leads to delinquency. In his study of 44 juvenile thieves, Bowlby (1944) found that 14 were affectionless psychopaths, and 12 of these had experienced prolonged early separation, compared with very few in a control group.

Defence mechanisms may also allow offenders to unconsciously justify their behaviour: displacement may explain attacks on innocent victims who substitute for the real target of frustration, sublimation may channel a desire to attack someone into vandalising their car, and rationalisation allows offenders to justify crimes, e.g. 'rich people deserve to be burgled'.

A major weakness is that psychodynamic concepts such as the superego are unconscious, so they cannot be directly observed or empirically tested. The theory is unfalsifiable and therefore unscientific.

Freud's theory predicts that girls develop weaker superegos because they identify less strongly with their mothers, so females should offend more. In fact far more males than females offend, which contradicts this. Also, there is no evidence that children raised without a same-sex parent offend more or are less moral, challenging the weak superego explanation.

Bowlby's study has also been criticised. It was a correlation, so we cannot say deprivation caused offending; the data were collected retrospectively through interviews, and Bowlby conducted the interviews himself, knowing which group each boy was in, so investigator bias may have occurred. His theory also confused deprivation with privation and placed the blame on mothers, which is socially sensitive. Lewis (1954) found that early separation did not predict later criminality in a much larger sample of 500 young people.

The approach is also criticised for seeing offending as a problem within the individual, neglecting social conditions such as poverty, lack of education and

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deprivation. Alternative explanations such as differential association theory (Sutherland) argue that offending is learned through interaction with others, which can better explain why crime is concentrated in certain communities. Psychic determinism is another issue: if offending is determined by unconscious childhood conflict, offenders cannot be held fully responsible and change may seem impossible, which is problematic for the legal system. However, an advantage is that the approach combines nature (innate id drives) and nurture (early experience), and it highlights the importance of early childhood and emotional factors in offending, which has influenced later research and therapies.

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Section D: Addiction

37

The theory of planned behaviour (Ajzen, 1985) explains how beliefs affect behaviour change, such as giving up an addiction. It states that behavioural intention is the best predictor of behaviour change, and intention is determined by three factors. Personal attitude is the person's own beliefs about the addictive behaviour (e.g. smoking is harmful). Subjective norms are beliefs about what significant others, such as family and friends, think about the behaviour (social pressure). Perceived behavioural control is how much the person believes they can control their behaviour (self-efficacy), which can also directly affect behaviour.

38

There is supporting evidence: Armitage and Conner (2001) carried out a meta-analysis of 185 studies and found the model was a good predictor of intention and behaviour, and Hagger et al. (2011) found it predicted reduced alcohol intake. It has practical applications in designing health interventions. However, intention does not always lead to behaviour change (the intention-behaviour gap), as much of the variance in behaviour is unexplained. The model also ignores irrational and emotional factors such as cravings, and relies on correlational, self-report data.

39

Genetic vulnerability is a risk factor: twin and adoption studies indicate addictions such as alcoholism and nicotine dependence are partly inherited. Genes may influence the number of dopamine receptors, e.g. the DRD2 gene, so people with fewer receptors may seek stimulation from drugs, and genes affect enzymes that metabolise substances such as alcohol. Genes may also act indirectly through personality traits.

Personality traits are linked to addiction: drug dependency has been associated with high neuroticism and psychoticism (Eysenck). Cloninger suggested three dimensions: high novelty seeking, low harm avoidance and high reward dependence are linked to addiction. Stress is another risk factor:

people may use substances to self-medicate and gain temporary relief from chronic stress and negative life events, and early childhood stress can affect the development of dopamine systems.

Social factors include family influences, as children observe parents' addictive behaviour and learn through modelling and vicarious reinforcement, and peers, as social identity and peer pressure (conformity) encourage experimentation with substances.

There is research support for genetic factors. Kendler et al. (2012) studied a large sample of adopted people in Sweden and found that those whose biological parents abused drugs were twice as likely to develop drug abuse themselves. However, it is very difficult to disentangle genetic and environmental influences, as families share environments as well as genes, and twin studies may overestimate heritability as MZ twins are treated more similarly.

There is support for personality as a risk factor: Wan-Sen Yan et al. (2013) found that addicted individuals scored differently on personality traits, such as higher impulsivity, from controls. For stress, Wills (1992) found that adolescents experiencing more stressful life events were more likely to use substances. For peers, Akers and Lee (1996) found that the smoking behaviour of adolescents' friends was a strong predictor of their own smoking over time.

However, studies of risk factors are correlational because these factors cannot be manipulated, so they do not show cause and effect. For example, stress may lead to addiction, but addiction may also cause stressful life events such as debt and relationship problems. Also, it is impossible to assess the relative effect of each risk factor as they are interlinked: family and peer influences overlap, and genetic factors may underlie all the others by influencing personality, how we experience stress and how responsive we are to social influence. This suggests a diathesis-stress model, where genetic

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vulnerability is triggered by environmental factors, is the most appropriate explanation.

The risk factor approach is also partly deterministic, but it avoids extreme determinism because risk factors increase probability rather than guarantee addiction, allowing some free will. It supports an interactionist view of the nature-nurture debate.

Finally, understanding risk factors has important practical implications: health initiatives can target at-risk groups, e.g. adolescents in families with a history of addiction or high-stress environments, and peer-based prevention programmes can challenge social norms that encourage substance use, potentially reducing the economic cost of addiction.