17.1 The Nature of Addiction and Risk Factors

AQA 7182 · about 60 minutes · Write-in edition

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions.

1 Outline tolerance in addiction research and explain what it implies for use.

(Total for Question 1 is 3 marks)

2 Explain one reason why the addictive personality concept is disputed.

(Total for Question 2 is 3 marks)

3 Outline withdrawal syndrome in addiction and give one example of a withdrawal symptom.

(Total for Question 3 is 3 marks)

4 Outline genetic vulnerability as a risk factor and give one type of supporting evidence.

(Total for Question 4 is 4 marks)

5 Outline the role of stress and self-medication in addiction development and maintenance.

(Total for Question 5 is 4 marks)

6 Outline family and peer social risk factors for addiction, with parental modelling and peer norms.

(Total for Question 6 is 4 marks)

7 Apply family modelling and peer-group norms to explain Erin's developing alcohol misuse.

(Total for Question 7 is 4 marks)

8 Identify and explain three named risk factors relevant to Yusuf's drug use.

(Total for Question 8 is 6 marks)

9 Discuss risk factors in the development of addiction, evaluating genetic, stress and personality factors plus methodological and theoretical issues.

(Total for Question 9 is 16 marks)

Mark scheme · 17.1 The Nature of Addiction and Risk Factors

Question 1

states that tolerance is when the usual dose or amount produces a reduced effect over time oe	**M1**
explains that users therefore need increasing doses or more intense behaviour to achieve the same effect oe	**A1**
may refer to physiological adaptation of receptors or diminished response with repeated exposure oe	**A1**

Answer: Tolerance is when the same dose produces a smaller effect over time, so the person needs larger doses or more intense behaviour to get the same effect, often because of physiological adaptation.

Question 2

states a valid reason, e.g. inconsistent research findings or lack of a single consistent trait that predicts addiction oe	**M1**
explains that different studies find different trait associations and that traits interact with environment, so a single personality type is not supported oe	**A1**
may mention methodological problems like reliance on self-report or cross-sectional designs that cannot establish causation oe	**A1**

Answer: The addictive personality is disputed because research does not find a single consistent trait that predicts addiction; associations vary and traits interact with environmental factors, and many studies rely on self-report or cross-sectional designs that cannot establish whether traits cause addiction or result from it.

Question 3

states that withdrawal syndrome refers to unpleasant physical and/or psychological symptoms when use of a substance or behaviour is reduced or stopped oe	**M1**
gives an example of a withdrawal symptom, e.g. shaking, sweating, nausea, anxiety, irritability or low mood oe	**A1**
explains that withdrawal can reinforce continued use because people resume use to relieve symptoms oe	**A1**

Answer: Withdrawal syndrome is the set of unpleasant physical or psychological symptoms experienced when use is reduced or stopped; for example alcohol withdrawal can include tremors and anxiety, and withdrawal often leads users to resume use to relieve symptoms.

Question 4

states that genetic vulnerability means inherited factors increase the likelihood of developing addiction oe	**M1**
explains this can involve genes affecting neurotransmitter systems, reward sensitivity or metabolic rates oe	**A1**
identifies family or twin study evidence as a type of support, e.g. higher concordance rates in identical twins or increased risk in children of addicted parents oe	**B1**
may state that twin studies compare monozygotic and dizygotic concordance to infer genetic influence oe	**B1**

Answer: Genetic vulnerability means inherited factors make someone more likely to develop an addiction, for example via genes that affect reward sensitivity or metabolism; supporting evidence includes family and twin studies showing higher concordance or risk among biological relatives, especially identical twins compared with non-identical twins.

Question 5

states that stress can increase the likelihood of initiating use and of relapse under pressure oe	**M1**
explains self-medication, where individuals use substances or behaviours to reduce negative feelings from stress oe	**A1**
links stress to maintenance, e.g. negative reinforcement where relief from stress reinforces continued use oe	**B1**
may mention chronic stress altering neurobiology, increasing vulnerability to addiction oe	**B1**

Answer: Stress increases the chance of starting and relapsing because people may use substances to cope; self-medication means using a drug or behaviour to reduce stress or negative emotions, and relief from stress acts as negative reinforcement that maintains use. Chronic stress can also change brain systems, increasing vulnerability.

Question 6

states that family and peers influence initiation and maintenance of use through modelling and norms oe	**M1**
explains parental modelling, where children imitate parents who use substances, increasing perceived acceptability oe	**A1**
explains peer-group norms, where pressure or desire to fit in leads to starting or escalating use oe	**B1**
may mention mechanisms such as social learning and reinforcement from the group oe	**B1**

Answer: Family and peers shape whether someone starts and continues use: parental modelling teaches that use is acceptable and normal, while peer-group norms and pressure encourage initiation and escalation via social learning and social reinforcement.

Question 7

identifies parental or sibling modelling as influencing Erin by showing drinking is acceptable and normal oe **M1**

explains that observing siblings provides a behavioural template which Erin may imitate, increasing likelihood of regular use oe **A1**

identifies peer-group norms/praise for bold behaviour as social reinforcement that encourages continued drinking oe **B1**

explains how praise and belonging increase motivation to conform, so Erin may escalate frequency to fit in and gain approval oe **B1**

Answer: Sibling modelling teaches Erin that drinking is normal and acceptable, which she imitates; peer praise for bold behaviour acts as social reinforcement and increases motivation to conform, so Erin is more likely to continue and escalate weekend drinking to fit in and receive approval.

Question 8

identifies stress/self-medication as a risk factor, linked to Yusuf using to reduce anxiety about deadlines oe **M1**

explains how self-medication provides negative reinforcement by relieving stress, which maintains use oe **A1**

identifies genetic vulnerability/family history as a risk factor, referencing his first cousin with substance dependence oe **M1**

explains family history suggests increased inherited vulnerability or shared environment that raises Yusuf's risk oe **A1**

identifies personality/impulsivity as a risk factor, citing Yusuf's self-description as impulsive when stressed oe **M1**

explains impulsivity reduces self-control and increases likelihood of risky use and faster escalation to problematic levels oe **A1**

Answer: Stress and self-medication: Yusuf uses the drug to reduce anxiety about deadlines, which negatively reinforces use and maintains it. Genetic vulnerability: a close relative with dependence suggests an inherited or shared environmental risk that raises his susceptibility. Personality, especially impulsivity: Yusuf's impulsive reactions to stress reduce self-control and make risky, repeated use and escalation more likely.

Question 9

Level 4 Knowledge of genetic, stress-related and personality risk factors is accurate and detailed. Evaluation is thorough and balanced, including methodological issues such as correlational designs, twin study limitations, and ecological validity, and theoretical critique of reductionist biological accounts. Clear, sustained integration of evidence and argument, including interaction between factors, is shown. Specialist terms used effectively. **13-16**

Level 3 Knowledge is generally accurate with some development. Evaluation is relevant and balanced but may lack depth in places. Some integration of evidence and discussion of interactions between risk factors. Answer is clear and organised with generally appropriate use of terminology. **9-12**

Level 2 Knowledge is present but limited or partially inaccurate. Evaluation is brief or one-sided, with limited treatment of methodological issues or interactions between factors. Application of evidence is superficial. Organisation and use of terminology may be inconsistent. **5-8**

Level 1 Knowledge is minimal and fragmented. Very limited or absent evaluation. Little or no reference to evidence or interactions. Answer lacks structure and relevant terminology. **1-4**

Level 0 No creditable content. **0**

Indicative content:

- AO1: Genetic risk factors include family and twin study findings showing higher rates of addiction among biological relatives and higher concordance in monozygotic compared with dizygotic twins, suggesting heritable influence.
- AO1: Stress-related factors include acute and chronic stress as triggers for initiation and relapse, and the self-medication hypothesis where substances are used to reduce negative affect, providing negative reinforcement that maintains use.
- AO1: Personality factors such as high impulsivity and sensation seeking are associated with increased risk; the 'addictive personality' idea is disputed because no single profile reliably predicts addiction.
- AO3: Correlational nature of much genetic and personality evidence, so associations do not prove causation: family studies confound genetic and shared environmental influences, and twin studies have assumptions such as equal environments.
- AO3: Methodological issues in measuring personality and impulsivity, including reliance on self-report, retrospective bias and failing to separate cause from early effects of use.
- AO3: Biological reductionism critique, for example attributing risk solely to genes ignores psychosocial factors and interactions; purely biological accounts may miss learning, culture and social context that shape use.
- AO3: Strength of biological evidence includes consistent findings across studies that genetic factors contribute to variance in addiction susceptibility, and plausible biological mechanisms such as differences in dopamine pathways or metabolism.
- AO3: Interactionist perspective: gene-environment interaction and gene-environment correlation mean genetic vulnerability may be expressed only under stress or in certain peer contexts; personality may moderate stress responses or exposure to risky peers.
- AO3: Practical applications and implications: identifying at-risk individuals could inform prevention, but ethical concerns arise around genetic screening, stigma and determinism. Interventions addressing stress and social context may be effective alongside any biological treatment.
- AO3: Suggest specific study limitations, such as non-representative samples, cultural variation in risk factors, and the difficulty of longitudinal research necessary to establish temporal precedence.