17.2 Explanations for Nicotine and Gambling Addiction, and Reducing Addiction: Test Pack

AQA 7182 · about 20 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer the short questions in clear sentences for full credit. At least three answers should be written in full sentences.

1 Outline aversion therapy as a behavioural method to reduce addictive behaviour, and give one example of how it might be used in treating nicotine dependence.

(Total for Question 1 is 4 marks)

2 Explain briefly how nicotinic acetylcholine receptors (nAChRs) contribute to dependence on nicotine in the brain neurochemistry explanation.

(Total for Question 2 is 3 marks)

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3 Outline the Theory of Planned Behaviour (TPB) and a stages-of-change model briefly, and evaluate how these cognitive approaches could be used to design interventions to reduce gambling addiction.

(a) Outline the main components of the Theory of Planned Behaviour and the stages-of-change model (also called the transtheoretical model). **(4)**

(b) Evaluate how TPB and stages-of-change could inform interventions for gambling addiction, giving strengths and weaknesses. **(4)**

(Total for Question 3 is 8 marks)

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Mark scheme · 17.2 Explanations for Nicotine and Gambling Addiction, and Reducing Addiction: Test Pack

Question 1

states that aversion therapy pairs the addictive behaviour with an unpleasant stimulus to produce an avoidance response oe	**M1**
explains the classical conditioning basis: the target behaviour becomes associated with an aversive consequence and so is less likely to occur oe	**A1**
gives a plausible example for nicotine, e.g. using a mild emetic or unpleasant-tasting spray when the client smokes, or rapid smoking followed by nausea induction oe	**A1**
notes briefly a limitation or ethical concern, such as discomfort or acceptability to patients oe	**B1**

Answer: Aversion therapy pairs the addictive behaviour with an unpleasant stimulus so the behaviour elicits an avoidance response via classical conditioning; for nicotine this could involve rapid smoking followed by an emetic or an unpleasant taste when smoking to create nausea, but such techniques raise ethical and acceptability concerns.

Question 2

identifies that nicotine binds to nicotinic acetylcholine receptors in the brain oe	**M1**
explains that repeated stimulation leads to receptor upregulation or changes in sensitivity, contributing to tolerance oe	**A1**
explains that absence of nicotine produces withdrawal because normal receptor signalling is altered, motivating further use oe	**A1**

Answer: Nicotine binds to nicotinic acetylcholine receptors; repeated exposure alters receptor numbers and sensitivity producing tolerance, and when nicotine is absent withdrawal symptoms occur because normal signalling is disrupted, which motivates further use.

Question 3

(a) states TPB components: attitude toward the behaviour, subjective norms, and perceived behavioural control oe	**M1**
(a) explains that intention to change is predicted by these three components oe	**A1**
(a) states stages-of-change stages, e.g. precontemplation, contemplation, preparation, action, maintenance oe	**M1**
(a) explains that interventions can be matched to stage, since readiness to change varies across individuals oe	**A1**

(a) Answer: TPB holds that behaviour is predicted by intention, which is influenced by attitude, subjective norms and perceived behavioural control; the stages-of-change model proposes sequential stages such as precontemplation, contemplation, preparation, action and maintenance, implying interventions should match the person's readiness to change.

(b) identifies a strength, e.g. TPB helps target attitudes and perceived control so interventions can change beliefs about gambling and increase perceived ability to refuse urges oe	**M1**
(b) explains why this matters, e.g. changing social norms and enhancing self-efficacy can reduce intentions and therefore reduce gambling behaviour oe	**A1**
(b) identifies a limitation, e.g. TPB and stages models focus on cognitive processes and intention but may not fully address strong addictive urges driven by neurochemistry or reinforcement schedules oe	**M1**
(b) explains consequence, e.g. interventions based only on changing intentions may fail if physiological craving or variable reinforcement keep behaviour going, so multi-component approaches may be needed oe	**A1**

(b) Answer: TPB allows interventions to target attitudes, norms and perceived control to reduce intentions to gamble, and the stages model encourages tailoring support to readiness to change, which can increase uptake and success; however both approaches may underplay biological and reinforcement factors that sustain gambling, so cognitive interventions are most effective when combined with behavioural or pharmacological strategies.

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