AQA Psychology A-Level

Option 3: Addiction

Essay Plans

Many smokers talkabout the cravings they have for nicotine and the pleasure they get out of smoking.
With reference to these experiences, discuss brain neurochemistry as an explanation for nicotine addiction. (16 MARKS)

AO1	• The active ingredient in tobacco is nicotine, which can act as a stimulant, making people feel more alert and improving their cognitive function, as well as a relaxant, making people less irritable- this is known as 'the nicotine paradox'. • A genetic basis for addiction has been found with mz twins have a higher rate of gambling than dz twins. This concordance rate suggests that there is a biological basis that makes people more susceptible to addictive behaviour. This susceptibility is caused by abnormally low levels of dopamine. The dopamine reward pathway is not stimulated in such individuals, and as a result, behaviours that increase their levels of dopamine give them strong euphoric feelings. • Nicotine is absorbed and takes less than 10 seconds to reach peak levels in the brain and the bloodstream, it then activates regions in the brain that regulate feelings of pleasure. Nicotine attaches to neurons in the VTA, doing this triggers the release of dopamine by the nucleus accumbens (NA). This triggers the release of glutamate, which triggers the release of more dopamine. Dopamine causes feelings of pleasure, meaning that the behaviour that led to its release- smoking is likely to be repeated. • The effects of nicotine disappear within a few minutes, causing a need to continually take in nicotine to get a pleasurable feeling- a craving.
AO3	1. Paterson and Markou (2002), they found that a drug used to treat epilepsy reduces dopamine release in the NA that occurs after nicotine is taken. This reduces the addictive quality of nicotine by counteracting any pleasurable effects caused by their use, supporting the link between nicotine and dopamine. 2. Cosgrove et al (2014) studied the brains of men and women whilst they were smoking. In women, there was a strong and rapid increase of dopamine in the dorsal putamen, whereas men had low activation in this area. But, men experienced great activation in the ventral striatum and women did not. 3. The genetic explanation of addiction means that why people with the same environmental experiences all do not develop addictions can be explained. This is because some people are more vulnerable due to genetic factors, and the stressor they experience cause addiction to occur in these individuals, as predicted by the diathesis-stress model. 4. This explanation has allowed for new forms of treatment to be developed. Nicotine Replacement Therapy (NRT) has been used to try and reduce addiction. In addition to this, it leads to treatment which can prevent comorbid disorders associated with nicotine addiction like depression and alcoholism.

Outline and evaluate the cognitive explanations of gambling. (16 MARKS)

AO1	• Gambling addiction is based on cognitive biases and irrational expectations. Gamblers have irrational ideas of expectancy, which is emphasised by their tendency to focus on the rewards of their addiction, like winning money rather than on any losses, which is known as the recall bias. • The gambler's fallacy is when gamblers believe their losses cannot last forever and that they inevitably must be 'due' a win. Another cognitive bias is the 'near miss bias'. This is founded on the belief that an unsuccessful outcome is akin to 'nearly winning'. The gambler therefore doesn't view it as a loss and is encouraged to keep playing. • A final cognitive bias is 'illusions of control' which is illustrated through the performance of superstitious rituals which to the gambler aid their performance. Gamblers believe that gambling successfully is a skill and that losses are due to bad luck.
AO3	1. In a study by Griffiths, it was found that regular gamblers demonstrated 11.5% more instances of 'irrational verbalisations', than non-regular ones- though there were no observable differences in their number of wins. Verbalisations included statements like 'I'm good at playing this machine!'. Griffiths research showed that irrationality and holding cognitive biases are characteristic of problem gamblers. 2. Burger and Norris suggested that The extent to which gamblers believe they have control over events in their life differs, those who believe they have a high degree of control, may displace there's feelings to random events such as winning the lottery. This causes them to try and reclaim this control by gambling. 3. Michalczuk found that the gamblers all had an increasingly impulsive nature- demanding instant rewards rather than waiting for smaller rewards.This suggests that alongside the illusion of control, there is another cognitive element of gambling which is displayed through impulsivity. 4. Clark (2010) found that the cognitive theory has led to improved understanding of CBT as a treatment for gambling addictions- particularly the illusion of control aspect which is more identifiable to therapists. As a result of this, it is also now more easily treated by them, highlighting the practical and theoretical merits of the cognitive explanation of gambling. 5. However, research studies into cognitive distortions in gambling access the thoughts of gamblers through a process called 'introspection'. This method has been proven to be unreliable, which limits the validity of studies based on such evidence.

Outline and evaluate biological/psychological/public health interventions into addiction. (16 MARKS)

AO1	• Drug therapies have been used to treat gambling addiction, one such treatment involves opioid antagonists, which are drugs that bind to opioid receptors, preventing an individual from feeling the rewarding response they typically associate with gambling behaviour, an example of this is naltrexone. • Gamblers that are treated using SSRIs show improvements to their gambling behaviour. SSRIs increase serotonin which reduces stress and anxiety, many gamblers attribute their gambling to stress, and so reducing this stress in turn reduces the occurrence of gambling behaviour. • Alternative interventions are behavioural ones, such as aversion therapy which aims to reduce addiction by replacing the association of pleasure with an uncomfortable or unpleasant sensation, according to classical conditioning. During aversion therapy, individuals engage in gambling behaviour whilst being exposed to an unpleasant sensation like an emetic or a shock. Eventually performance of the behaviour becomes associated with the unpleasant stimulus, decreasing the likelihood that it will be repeated again. • Covert Sensitisation is an alternative to this and also involves creating an association between the unwanted behaviour and an unpleasant stimulus/consequence. However, this differs as the unpleasant stimulus is only imagined by the individual.
AO3	1. Aversion therapy is criticised for allowing individuals to experience physical consequences, this element is eliminated in covert sensitisation. Individuals are only required to imagine the unpleasant stimulus, reducing the chances of harm during treatment. 2. Behavioural modification therapies,only focus on the learned aspects of addictive behaviour and so neglect other psychological factors that may have caused the addictive behaviour. By only targeting the symptoms, the underlying cause is not resolved, meaning another addiction could develop after treatment finishes. 3. Blaszynski and Nower (2007) claim that research studies testing the effectiveness of drug therapy at reducing gambling addiction are characterised by small sample sizes/variation and high dropout rates. As a result of this, it is hard to draw conclusions about the influence of drug therapies on gambling addiction. 4. But Grant and Potenza (2006), found that 13 gambling addicts who were given an SSRI for 3 months had fewer anxiety symptoms and gambled less. This suggests that drug therapy- particularly the use of SSRIs are effective at reducing gambling addiction. 5. Drug therapies are often lauded for being quicker than other forms of treatment, but they actually require more motivation than behavioral treatments do. This is because the patients have to remember to take their medication consistently for it to be effective. But behavioural therapies rely on the 'innate ability of humans to learn associations, making that form of treatment comparatively effortless.

Outline and evaluate risk factors in addiction. (16 MARKS)

AO1	Individuals are more likely to befriend fellow smokers or drug users and non-smokers/drug users are more likely to befriend each other. This means that an individual may develop a drug addiction due to members of their social group also having a drug addiction, these peers serve as models that other adolescents imitate. A genetic basis for addiction has been found with mz twins having a higher rate of gambling than dz twins. This concordance rate suggests that there is a biological basis that makes people more susceptible to addictive behaviour. This susceptibility is caused by abnormally low levels of dopamine. The dopamine reward pathway is not stimulated in such individuals, and as a result, behaviours that increase their levels of dopamine give them strong euphoric feelings. Personality traits commonly associated with addiction were identified by Krueger et al (1998). These traits include impulsivity- behaving without thinking, which is believed to contribute to gambling, alcohol abuse and polysubstance use. A scale of assessing the extent of personality influences on addiction was developed by Barnes (2000). The scale showed that personality was a predictor in 'heavy' use of marijuana. Personality disorders have also been linked to addiction, with Verheul et al (1995) finding that personality disorders were present in 44% of alcoholics, 70% of cocaine addicts and 79% of opioid addicts.
AO3	1. Peers may not actually influence addictive behaviour in the way that is assumed. DeVries et al (2006) suggested that people engaged in drug use are likely to select peers that are also engaged in drug use. This suggests that drug use is not the result of being influenced by peers, and that other factors may be the cause of addiction. 2. Moreno et al (2010) studied the MySpace profiles of teenagers and found references to alcohol on over 50% of them. Viewing these profiles makes adolescents more willing to try alcohol, highlighting the significance of peer influences as a risk factor for developing addiction. 3. The genetic explanation of addiction explains why people with the same environmental experiences all do not develop addictions. This is because some people are more vulnerable due to genetic factors, and the stressor they experience cause addiction to occur in these individuals, as predicted by the diathesis-stress model. 4. Labouvie and McGee (1986) showed that individuals who scored higher on tests on impulsivity also used heavier levels of alcohol, showing a correlation between having an impulsive nature and addictive behaviour. 5. If personality influences are a key factor in the development of an addiction, vulnerable individuals can be identified and given help to prevent addictions from forming. Doing this has implications for the emotional health to these individuals as well as benefits for the economy.

Outline and evaluate the Theory of Planned Behaviour. (16 MARKS)

AO1	• Developed by Ajzen (1989), this states that and individual's intentions to engage in a behaviour can directly influence their decision to engage in that behaviour. This is broken down into components: behavioural attitudes, subjective norms and perceived self-control. • Behavioural attitudes refer to an individual's views on a behaviour- favourable views mean they are likely to engage in that behaviour. Favourable views are usually formed when they perceive positive consequences for that behaviour. • Subjective norms are how the majority perceive a behaviour. • The extent to which an individual believes they have control over their actions is perceived behavioural control- those with higher perceived self-control are likely to persevere and abstain from addictive behaviour.
AO3	1. TPB is based on attitudes which are subject to social desirability bias- so they may be poor predictors of behavior. This is because individuals may report negative attitudes to their addiction, but still engage in addictive behaviour. 2. Miller and Howell (2005) found that whilst TPB could predict intentions, it was unable to predict actual behaviour. If TPB cannot predict behavioural change, it is difficult to create interventions that bridge the gap between intention and the occurrence of the behaviour. 3. TPB predicts that behaviour is rational, but the occurrence of addictive behaviour comes from irrational thinking according to the cognitive theory. TPB therefore does not account for cognitive biases in addiction, showing its lack of explanatory power which limits its effectiveness. 4. Hagger et al (2011) found that all of the factors in TPB were able to predict the intention to stop drinking- but not all addictions, suggesting that it is not suitable for all addictions.

Outline and evaluate Prochaska's Six Stage Model (16 MARKS)

AO1	• The first stage of the model is precontemplation-Individuals in this stage are not yet thinking of changing their behaviour and may be unaware that their behaviour is problematic. Individuals at the next stage- contemplation, are aware that they have a problem, but are yet to make any commitments towards changing their behaviour. • Once the individual makes commitments to change, they enter the preparation change. In this stage the individual combines intention to change with behaviour. An example of this may involve having the intention to quit smoking, and then over time smoking fewer cigarettes. • In the action stage, individuals begin to modify their behaviour, entrance to this stage requires behaviour modification that has persisted for btween a day and 6 months. • Once an individual has maintained behavioural changes for over six months they are in the maintenance stage, and any intervention should focus on relapse prevention. • Termination is when an individual is no longer tempted to engaged in their previous behaviour and are confident that they can remain abstinent. According to Prochaska, only 1 in 5 people reach this stage.
AO3	1. The model has an accepting attitude to relapse, recognising that it is not a sign of failure, but rather an inevitable part of stopping an addiction, thus making it more sympathetic and realistic model of behavioural change. 2. But, the model has a lack of predictive validity, with it being unable to predict who is likely to make changes towards stopping addictive behaviour. This limits the usefulness of the model, raising questions about its general validity. 3. Where other models have an 'all or nothing approach' to stopping addiction, Prochaska's model is dynamic and recognises that time and other factors are important in stopping addictions. 4. The model recognises that individuals enter and leave the process at any point, even cycling through several stages repeatedly before abstinence, if they ever reach that stage. 5. The stages in the model are arbitrary, if an individual is abstinent for 6 months, they are in the action stage, but if they are abstinent for one day longer, they are in the maintenance stage. Furthermore, Bandura has said that there are no differences between the first two stages of the model, challenging its usefulness.