

SAMPLE NOTES

UNIB20008

Currently

- Smoking has decreased in Australia
- Sales have decreased, representing less people starting, not so many people quitting
- Tobacco industry now promotes vaping and nicotine gum using same old tactics, candy flavoured to target younger people

Addiction

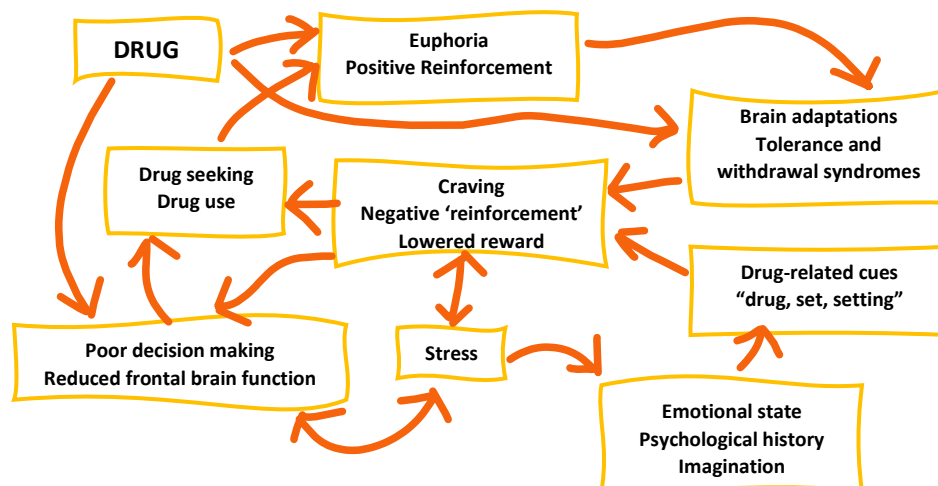
- **Addiction** is said to comprise the following components:
 - Physiological dependence (withdrawals)
 - Psychological dependence (cravings)
 - Compulsion to obtain and use the drug, despite negative consequences
 - Does not require intoxication
- Addictive drugs include nicotine, opioids, caffeine and gambling (sort of)
 - These drugs are very different in their pharmacology, mechanisms and damage
 - These drugs share one commonality: make you feel good (reward centre ^ dopamine)
- Dependence and physical harm are positively correlated for addictive drugs, heroin is the worst

'Wrong' Models of Addiction

- **Addiction from ignorance**: don't know that it causes harm, but this means if people are educated (which they are now) they wouldn't take drugs and get addicted, but they do
- **Biological necessity**: food and sex activate same reward systems, evident in animals as well as they seek out drugs, therefore it is just the brain seeking pleasure, if this were the case, could attain this pleasure in other ways
- **Social model – failure of willpower**: implies addicts are inferior and at fault and that if they tried harder they wouldn't be addicted. Nancy Reagan saying – “Just Say No™” still referenced today...

The 'Right' Model of Addiction

- **Model of interconnecting factors**: this complicated model demonstrates addiction as a very complex experience which differs between individuals and contexts
 - This model also applies for gambling which is designed to engender addiction with the lights, colours, irregular/unpredictable rewards, pleasurable experience



Addiction as a (disordered) Neurochemical State

- **Dopamine** is the neurotransmitter of addiction as it mediates pleasure and reward, addictive drugs increase the amount of dopamine, thus resulting in pleasure
- By some, addictive drugs are used as self-medication for lack of reward centre activity, but not everyone is the same!!

- **Bozarth & Wise (1986)**: measured the amount of heroin intake for rats, for rats with dopamine nerve damage, their heroin intake was significantly higher than the heroin intake for the control rats with no dopamine nerve damage
- **Wang**: fMRI, demonstrated number of dopamine receptors for control group compared to cocaine, alcohol and heroin groups. In each case, there were significantly less dopamine receptors in the reward centre for the drug conditions compared to control
- Regular use leads to less reward centre activity which means an individual needs to take a larger dose of the drug in order for the reward to be coded and 'better than expected'

Addiction leads to the down regulation of reward pathways

Addiction leads to a reduction in self-monitoring and decision-making capacity

Opium Wars and Opioid Crisis

- Still a health crisis in USA, it is the leading killer
- Created and perpetuated by the manufacturers and distributors of opioid drugs
- In 1999 to 2018, 450,000 died from overdoses related to opioids, which is likely an undercount by up to 28% due to the fractured health system in the USA

Opium Wars

- Great Britain v China, lasted for over 100 years, GB won due to larger military and power
- Began with trade
 - **China → Britain**: tea, porcelain, silk (very good)
 - **Britain → China**: silver, opium (up to 6500 tonnes in 1880)
- Britain liked it because it balanced out the cost and was addictive so it kept selling
- China made it illegal to consume opium which reduced the market briefly
- Britain went to war to force China Government to open up to trade
- **Treaty of Nanking** (ended war)
 - China paid Britain to compensate for destroyed opium
 - China ports open for trade
 - Hong Kong ceded to Britain for 150 years
- In 1907, Britain stopped trading opium with China

Opioid Crisis

- There are 3 waves commonly described:
 - 1. 1999-2010**: prescription opioids as painkiller, often overdose when trying to stop addiction
 - 2. 2010-2013**: heroin rises as pill mills close and prescription pain killers aren't available
 - 3. 2013-present**: synthetic opioids were cheaper and stronger which meant more overdoses which were very difficult to treat

Wave One

- Got there due to advertising and 'education' which was actually propaganda
- **Sackler family**: philanthropic donors, made fortune by owning drug company with OxyCodon as a small contributor, mainly used for terminally ill cancer patients (small market), so started advertising and taking advantage of the addictive nature of it
 - **Purdue way**: doctors were told that you couldn't get addicted to opioids, rewarded doctors when they gave out prescriptions, pain was promoted to the 5th clinical sign as it was 'undertreated', redid OxyCodon to OxyContin which was a controlled release pill said to not be