Drug Addiction and its Treatment
(Module 918C8)

Module Convenor: Professor Aldo Badiani

NOTE: Most of the questions you need answers to about this Module are in this handbook. Please read it fully and carefully before your first seminar.

NOTE: This document concerns the structure and content of the Module. If you have questions about procedures, please consult the School of Psychology Administration Office in Pevl 2A13 or via psychology@sussex.ac.uk.
Module content

The module will cover the following topics: Basic pharmacology of addictive drugs; History of recreational drug use; Drug-induced neuroplasticity; Major theories of drug reward and drug addiction; Drug harm; Treatment of drug addiction. Thus, the scope of the module will range from basic pharmacology to clinical intervention. Particular emphasis will be placed on real-life aspects of drug abuse and drug addiction.

Module objectives

By the end of the module successful students should be able to:

1) Understand the mechanisms of action of addictive drugs;
2) Understand how addictive drugs can induce enduring changes in brain and behaviour;
3) Critically discuss and analyse major concepts and theoretical models of drug addiction;
4) Critically discuss and analyse the concept of drug harm and harm reduction;
5) Discuss the therapeutic options for the treatment of drug abuse and addiction.

Module Contact Information

Convenor: Prof. Aldo Badiani
Location: Pevensey I, Room 2B19
E-mail: aldo.badiani@sussex.ac.uk
Office hours: Wednesday, 13:00-15:00, or by appointment (via email).
Lectures & Workshops

Lectures (location: Medical School MS3.07A)
The 12 lectures will last 2 hours each, with a short break in the middle.

Workshops (location: Arts A - A005)
The 4 workshops will last 1 hour each.

Reading material

No single text covers all topics relevant to this module. The most important course material is represented by the journal articles listed in the next sections.

However, the following two books are required reading


Students who have strong interest in the clinical aspects of drug addiction may consider the following texts:


Assessment

Literature Review (due: End of Year Assessment week 1)
A 3000-word literature review concerning a topic to be chosen from those that will be made available at the end of Wk 2. Check Sussex Direct for the Assessment deadline. The review will be worth 100%. More information about this assignment will be provided in class and/or via Study Direct.

Important Information:

Information on the following can be found at the link below:
• submitting your work
• missing a deadline
• late penalties
• EC – Exceptional Circumstances (formerly known as MEC- mitigating evidence)
• Exams
• Help with managing your studies and competing your work
• Assessment Criteria
  http://www.sussex.ac.uk/psychology/internal/students/examinationsandassessment

Important note: Appropriately completing and submitting formally assessed work is your responsibility. If you are in any doubt about the rules concerning submissions check with the departmental office. Two copies of your review must be submitted to the Psychology Departmental office, Pevensey 1, Room 2A13 before the deadline.

Please access Sussex Direct for submission deadlines:
https://direct.sussex.ac.uk
Lectures and workshops schedule

Lectures (location: Medical School MS3.07A; time: 11:00-13:00)

Week 1 – Wed, Feb 3
L01: Classification of substances of abuse
Definition of drug use, abuse, and addiction

Week 2 – Wed, Feb 10
L02: Key notions of drug pharmacology

Week 3 – Wed, Feb 17
L03: Heroin and other opioid drugs

Week 4 – Wed, Feb 24
L04: Cocaine and other psychostimulant drugs

Week 5 – Wed, Mar 2
L05: Alcohol

Week 6 – Wed, Mar 9
L06: Tobacco, cannabis, and other drugs

Week 7 – Wed, Mar 16
L07: Biopsychology of reward and motivation
Shared mechanisms of action of addictive drugs

Week 8 – Wed, Apr 6
L08: Theories of drug addiction

Week 9 – Wed, Apr 13
L09: Epidemiology and etiology of drug addiction

Week 10 – Wed, Apr 20
L10: Drug harm

Week 11 – Wed, Apr 27
L11: Treatment of drug addiction

Week 12 – Wed, May 4
L12: Review and discussion of the module content

Workshops (location: A05; time: 13:00-14:00)

Week 1 – Fri, Feb 5
W01: Why do humans use drugs? – Part I

Week 2 – Fri, Feb 12
W02: Why do humans use drugs? – Part II

Week 3 – Fri, Feb 19
W03: Drug, Set, and Setting

Week 4 – Fri, Feb 26
W04: Drug addiction: choice or disease?
Lectures 1  Classification of substances of abuse
Definition of drug use, abuse, and addiction

Virtually all psychoactive substances are produced by plants or are chemical analogs of substances contained in plants. Many of them (including caffeine, nicotine, delta-9-tetrahydrocannabinol, cocaine, and morphine) are neurotoxins. The rewarding effects of neurotoxins represent an evolutionary paradox.

Drug addiction is not an automatic outcome of drug use. Only approximately 20% of people who use drugs such as cocaine or heroin will switch from controlled to compulsive use. Thus, one of the aims of addiction research is to identify the mechanisms that are responsible for the transition from one stage of the disorder to the next: from initial drug use to chronic drug use and then to compulsive, relapsing drug abuse.

Readings


Lecture 2  Key notions of drug pharmacology

Readings

Lecture 3  
Heroin and other opioid drugs

Readings


Lecture 4  Cocaine and other psychostimulant drugs

Readings


Lecture 5  Alcohol

Readings

Lecture 6  Tobacco, cannabis and other drugs

Readings


Lecture 7  

Biopsychology of reward and motivation; Shared mechanisms of action of addictive drugs

The motivation to take drugs is thought to depend on their ability to modulate directly or indirectly the reward systems of the brain.

It is thought that repeated exposure to addictive drugs produces both short-lived and long-lasting changes in neural connectivity as well changes in cognitive functions and behaviour. The exact nature of these alterations and their role in drug addiction is the subject of scholarly dispute.

Readings


Lecture 8  
**Theories of drug addiction**

A unified view is at the core of current theories of drug addiction. These unified theories have led to many important discoveries, some of which are described below, but they have also diverted investigators’ attention away from psychological and neurobiological processes that characterize specific types of addiction.

Readings


Lecture 9  
Epidemiology & etiology of drug addiction

A unified view is at the core of current theories of drug addiction. These unified theories have led to many important discoveries, some of which are described below, but they have also diverted investigators' attention away from psychological and neurobiological processes that characterize specific types of addiction.

Readings


Lecture 10  Drug Harm

Readings


Lecture 11  Treatment of drug abuse and harm reduction

Readings


Additional reading

Lecture 12  Review and discussion of the module content
Workshops 1-2 – Why do humans use drugs?

Vulnerability to addiction seems to be influenced not only by genes but also by environmental factors, including adverse life experiences, acute exposure to stressors, drug-associated contextual and discrete cues, and other, more subtle aspects of the environment. Thus, the behavioural and subjective effects of addictive drugs should be seen as the result of complex interactions among the drug, the user’s physiological and mental state (set), and the circumstances of drug taking (setting).

Readings


Workshop 3 – Drug, Set, and Setting

Vulnerability to addiction seems to be influenced not only by genes but also by environmental factors, including adverse life experiences, acute exposure to stressors, drug-associated contextual and discrete cues, and other, more subtle aspects of the environment. Thus, the behavioural and subjective effects of addictive drugs should be seen as the result of complex interactions among the drug, the user’s physiological and mental state (set), and the circumstances of drug taking (setting).

References


Workshop 4 – Drug addiction: choice or disease?

The notion that addiction is a brain disease is often taken as fact. However, there alternative conceptual frameworks that see addiction as disorder of choice.

Readings


