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 Pev1 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: Thursdays, 13:00-15:00, or by appointment (via email).
Seminars & Workshops

Seminars
The 12 seminars will last 2 hours each, with a short break in the middle. Each seminar will include a formal presentation (lecture) but there will be plenty of time to discuss key articles from the literature and for students to present additional material.

Workshops (location: FUL-104)
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 textbook is required:


Also required is one of the following texts:


Assessment

Literature Review (due: Wk 12)
A 3000-word literature review concerning a topic to be chosen from those that will be made available at the end of Wk 2. The review is due at the end of the term and will be worth 30% of your final mark. More information about this assignment will be provided in class and/or via Study Direct.

Unseen Examination (date: Summer)
The unseen examination will consist of multiple choice questions and short-answer questions, and will be worth 70% of your final mark. More information about this assignment will be provided in class and/or via Study Direct.

Submission deadlines, late penalties, and misconduct

Important note: Appropriately completing and submitting formally assessed work is your responsibility. Definitive guidelines on this are provided in the ‘Handbook for Candidates’ available on the web or via departmental offices. If you are in any doubt about the rules concerning submissions check with the departmental office.

The exact deadline for the literature review will be published on Sussex direct. Two copies of your review must be submitted to the Psychology Departmental office, Pevensey 1, Room 2A13 before the deadline. Up to 24 hours late there will be a penalty of 5%. Up to one week late there will be a penalty of 10%.

V&E students should ensure that they discuss with the module convenor any alternative assessment submission deadlines.

Assessment policy and procedures regarding late submission and mitigating evidence are provided at: [http://www.sussex.ac.uk/studentlifecentre/mitigation](http://www.sussex.ac.uk/studentlifecentre/mitigation)

☞ Regulations concerning plagiarism and collusion can be found at: [http://http://www.sussex.ac.uk/academicoffice/resources/misconduct](http://http://www.sussex.ac.uk/academicoffice/resources/misconduct).
Seminars and workshops schedule

Seminars (location: A103; time: 11:00-13:00)

Wk 1 – Thu, Jan 23  S01: Naturally occurring psychoactive substances
Wk 2 – Thu, Jan 30  S02: Basic pharmacology I
Wk 3 – Thu, Feb 6   S03: Basic pharmacology II
Wk 4 – Thu, Feb 13  S04: Drug-induced changes in brain and behaviour
Wk 5 – Thu, Feb 20  S05: Biopsychology of reward and motivation
Wk 6 – Thu, Feb 27  S06: History of recreational drug use
Wk 7 – Thu, Mar 6   S07: Recreational drug use versus drug addiction
Wk 8 – Thu, Mar 13  S08: Theories of drug addiction
Wk 9 – Thu, Mar 20  S09: Drug Harm I
Wk 10 – Thu, Mar 27 S10: Drug Harm II
Wk 11 – Thu, Apr 3  S11: Treatment of drug addiction I
Wk 12 – Thu, Apr 10 S12: Treatment of drug addiction II

Workshops (location: FUL-104; time: 17:00-18:00)

Wk 1 – Fri, Jan 24  W01: Drug, Set, and Setting
Wk 2 – Fri, Jan 31  W02: Why do humans use drugs?
Wk 3 – Fri, Feb 7   W03: Again, why do humans use drugs?
Wk 4 – Fri, Feb 14  W04: Drug addiction: choice or disease?
Seminar 1 – Naturally occurring psychoactive substances

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.

Readings


Seminar 2 – Basic pharmacology of addictive drugs I

Pharmacodynamics

Readings


Seminar 3 – Basic pharmacology of addictive drugs II

Pharmacokinetics

Readings


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

Seminar 5 – Biopsychology of reward and motivation

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

Readings


Seminar 6 – History of recreational drug use

It is often assumed that the recreational use of psychoactive substances is in a simple relationship with their primary mechanism of action. For example, it is often stated that the recreational use of opiates originated over 3-4000 BCE. However, the history of recreational drug use is much more interesting and complex than that.

Readings


Seminar 7 – 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


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


Seminar 9 – Drug Harm I

Substance-specific harms

Readings


Seminar 10 – Drug Harm II

Harm reduction

Readings


Seminar 11 – Treatment of drug abuse I

Opiate addiction

Readings

   [Chapters 5-11]

   [Section 6, with particular attention to chapters 28-30, 34, 37]

Seminar 12 – Treatment of drug abuse II

Other types of drug addiction

Readings

   [Chapters 5-9, 11]

   [Section 6, with particular attention to chapters 31, 33, 35, 44]
Workshop 1 – 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 2 – Why do humans use drugs?

Evolutionary aspects of drug use

References


Workshop 3 – Again, why do humans use drugs?

Readings

t.b.a.
Workshop 4 – Drug addiction: choice or disease?

References

t.b.a.