Drug Contentions

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Psychoactive Substance Use is Abnormal

Academic Views of Psychoactive Substance Use

- Psychology:

  "Abnormal", "Forensic", "Criminal", etc.

- Sociology:

  "Deviant", "Subcultural", etc

- Pharmacology:

  Focus on physical/mental harms caused by drugs.

- Criminology:

  self-explanatory...

Alteration of consciousness

- Normal behaviour.
- One of the basic drives/needs, along with sex, food etc.
- In humans this is achieved by a number of means, e.g. fasting, dancing, meditating.
- But the quickest and most effective route is by ingestion of a substance (usually toxic).

Alteration of consciousness

- Animals appear to alter their consciousness via a range of substances as well.

  (see RK Siegel *"Intoxication: The Universal Drive for Mind-Altering Substances"*, G Samorini *"Animals and Psychedelics"*)
- Endogenous DMT (*Dimethyltryptamine*) is a *very* powerful "Class A" psychedelic drug, and is present in *all* mammals at *all* times.

  (see R Strassman *"DMT: The Spirit Molecule"*)
- Plus receptors for cannabis, opiates etc present in the brain.

Alteration of consciousness

- Why do people do it?
  - Enjoyment
  - Relaxation
  - Sociability
  - ‘Self-exploration’
  - ‘Pain relief’ (including *psychological* pain relief)

A (short) history lesson...

- **Opium**: The poppy plant was cultivated in Persia, Egypt and Mesopotamia 3500 – 5000 years ago.

- There's (sketchy) evidence that Neanderthal man may have used the opium poppy 30,000 years ago.

- The first known written reference to the poppy appears in a Sumerian text dated from around 6,000 years ago. As an aside, the flower was known as *hul gil*, "plant of joy".

A (short) history lesson...

- **Cannabis**: It's not really known where or when exactly humans began cultivating cannabis.

- The first direct reference to cannabis as a psychoactive dates from around 2700 BC in Chinese pharmacopeia.

- Cannabis is mentioned as a treatment for all sorts of things. Importantly, reference was made to the intoxicating properties of the plant.

A (short) history lesson...

- **Coca**: is the natural raw material for cocaine.

- There's evidence for the communal chewing of coca leaf from as far back as 6000 years ago.

- As far as I'm aware, coca was never really cultivated as such, as it just grew everywhere in the wild.

A (short) history lesson...

- **Alcohol**: There's some (inconclusive) evidence that (intentionally) fermented drinks existed as early as 12,000 years ago.

- While there's evidence of alcohol drinking in China from around 9000 years ago, brewing dates from ancient Egypt. Neither the Chinese nor the Egyptians had a problem with drunkenness per se, but warned against excessive drinking.

A (short) history lesson...

- The only culture without an indigenous psychoactive substance appears to have been the Inuit.
- Reasons for this are environmental: climate is unsuitable for survival of psychoactive plants or animals (e.g. Toads)
- However, when alcohol was introduced by explorers in the C19th, it was quickly assimilated into the culture (with questionable results...)

Heroin is necessarily addictive

- “The opiates are drugs of addiction… anyone who takes an opiate for a long enough time *will* become addicted.” (Edwards, 1981).

Is heroin necessarily addictive?

The Rat Park Experiments (Alexander, *et al*.):

- These involved creating an environment in which to carry out these experiments which closely resembled as practically possible a ‘natural environment’. As described by Alexander (1994):
- “Rat Park, as it came to be known, was airy and spacious, with about 200 times the square footage of a standard laboratory cage. It was also scenic, (with a peaceful British Columbia forest painted on the plywood walls), comfortable, (with empty tins, wood scraps, and other desiderata strewn about the floor), and sociable (with 16-20 rats of both sexes in residence at once).”

Is heroin necessarily addictive?

More from The Rat Park...

- “Nothing that we tried instilled a strong appetite for [drugs] or produced anything that looked like addiction in rats that were housed in a reasonably normal environment.” [p.27].

Is heroin necessarily addictive?

- Are there heroin users (who are also drinkers and polydrug users) who don't have social and medical "problems"?

- **Low levels of negative health and social outcomes among non-treatment heroin users in Glasgow (Scotland): Evidence for controlled heroin use.** Shewan, D & Dalgarno, P (2005).

- The project ran from 1995-1996 (pilot) and 1996-1999 (full study)

The “Non-Problematic” Heroin Use Study

- Participants were recruited via social networks and must have:
  - illicitly used opiates on at least 10 occasions in the previous 2 years.
  - Never been in treatment for any drug (including alcohol).
  - Never served a custodial sentence.
  - 126 people living in Glasgow; 75% were male, 25% were female, mean age 28.5 years.

The “Non-Problematic” Heroin Use Study

- Socioeconomic Status:
  - Occupational status (I = highest)

SES category	I	II	III	IV	V
Heroin sample	9%	29%	53%	9%	0%
UK population	5%	23%	48%	18%	6%

- At the time of the study, levels of the population currently in higher education in Scotland, was recorded at 47% of the general population (Universities Scotland, 2001).
- There were no significant differences between the controlled heroin use sample and the general population on either of these variables – possibly the most important finding in the study.

The “Non-Problematic” Heroin Use Study

Opiate Drug	Ever used	Average No. days used last two years	Mean years used	Mean age first use
heroin	124 (98%)	Mean – 167 Median - 50 Mode - 25	7	21
codeine	101 (80%)	Mean - 28 Mode - 0	7.5	21
opium	84 (67%)	Mean - 7 Mode - 0	9	22
methadone	69 (55%)	Mean - 31 Mode - 0	5	24

The “Non-Problematic” Heroin Use Study

Non-opiate Drug	*n* ever used	Mean age first use	Mean amount used *per* session
Alcohol	**126 (100%)**	**14**	**10 units**
Cannabis	**126 (100%)**	**15**	**1.5g**
Amphetamine	**124 (98%)**	**17**	**2g**
Ecstasy	**124 (98%)**	**21**	**1.5 pills**
Benzos	**106 (84%)**	**19**	**3 pills**
Cocaine	**122 (97%)**	**20**	**1g**
Crack	**39 (31%)**	**25**	**1 rock**

The "*Mundane*" Heroin Use Study...

Negative health and social outcomes:

- There was no association between use of drugs such as heroin and cocaine and crime.
- Another main finding was simply that levels of social and health problems among this group were low.

  (Shewan and Dalgarno 2005)

Substance Use & Mental Health

- Is substance use itself a mental illness?
  - Mental health problems often predate drug use
  - Is chaotic/indiscriminate drug use a symptom of mental illness?
  - Misguided attempt at self-medication?
  - What about the role of trauma?

The big question...

- Why do some people become “addicts” and others don’t?
  - Self medication hypothesis
  - Genetics
  - Social learning
- Patterns of use:
  - Stable vs. chaotic
  - Occasional vs. habitual
  - Use a little vs. use a lot

The big question...

- Social factors:
  - Little in the way of social capital
    - Education issues
    - Literacy issues
    - “Legitimate” income generation opportunities limited
  - A lot of substance misuse around them
    - Probably chaotic/problematic
    - Possibly injecting as method of use
    - Possibly generationally exposure
    - Cycles of deprivation

Why do some people become “addicts” and others don’t?

- Intent behind use (enjoyment or “self-medication”?)
- Being socially and psychologically “integrated”
  - “**Drug**, **Set** and **Setting**”
  - Understanding the communal/ritual aspects of use.
- Education (how to use, when to use, when not to use, risk reduction, etc)
  - “Drug, set and setting”
  - Understanding the communal/ritual aspects of use.
- Knowing when to stop

Drug, Set, and Setting

- DRUG - the pharmacological action of the substance.
- SET - underlying and learned psychological aspects of the user (also, biological factors). The "*mindset*" of the user.
- SETTING - situational factors, and the wider social and cultural context. The *external* setting.

Set

- Many problematic drug users also have (other) mental health problems, such as depression.
- These could be underlying health problems, they could be exacerbated by problematic drug use, they may (arguably)be the result of long-term problematic drug use.
- There is strong and increasing evidence that many problematic drug users are seriously traumatised.

  Dalgarno & Shewan (2005)

  Hammersley & Dalgarno *et al* (in press)

What can we do?

- Treatments:
  - Chemical, e.g. Methadone, Naltrexone
  - “Vaccinations” (Koob *et al* 2009): proposes the inoculation of pre-school children.
  - Deep Brain Stimulation (DBS): placing electrodes in the brain at key receptor sites. Effectively “switching off” the pleasure zones.

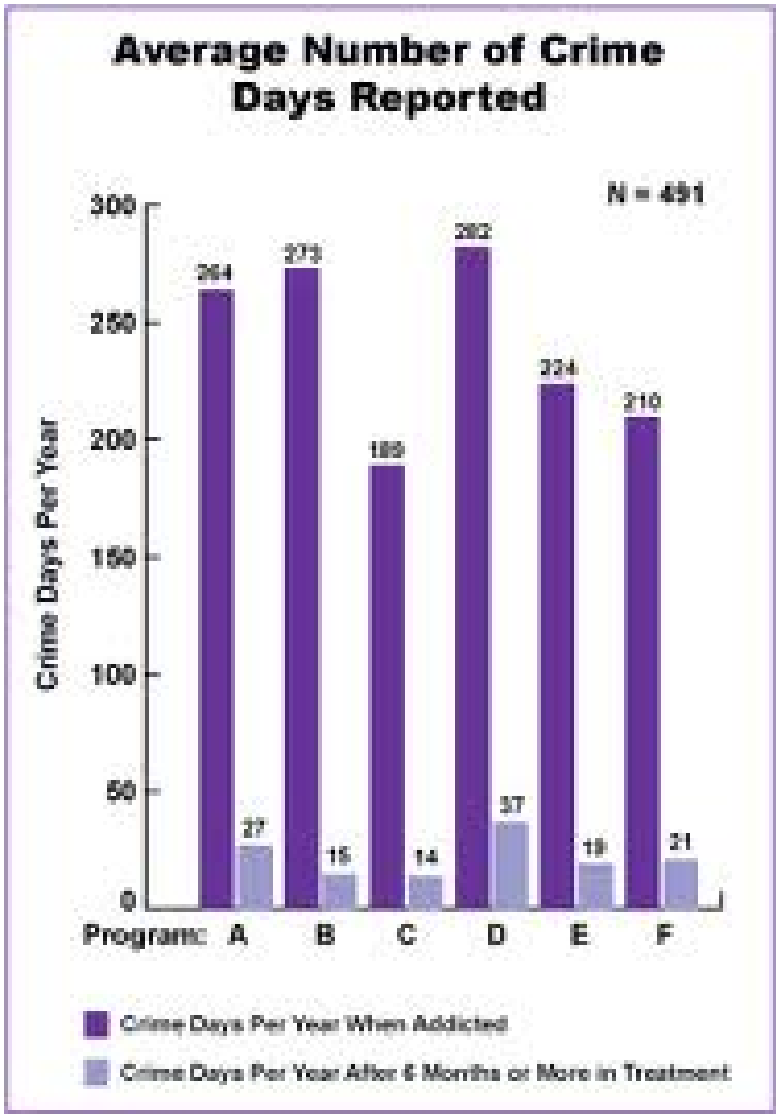
What can we do?

- Substitution treatments and therapies:
  - Methadone (oral liquid, tablet, etc)
  - Buprenorphine/Subutex/Temgesic (tablet, patches, etc)
- Methadone arguably the more common of these.
- Has a number of different trade names, e.g. Dolophine, Amidone, Physeptone, among many others

Methadone

Methadone

NIDA (2008)



Amsterdam Heroin Trial

- Highly problematic
- Highly criminal
- Multiple health issues (physical and mental)
- Resistant to methadone treatment
- Not engaging with treatment agencies

Amsterdam Heroin Trial

- Method was to track the progress of 3 groups:
  - A group in no treatment regime, using street heroin.
  - A group in traditional methadone treatment.
  - The study group receiving heroin assisted treatment
- Tracked them over a period of 4 years.

Table 5 Course of treatment outcome on primary outcome parameters, indicating 'absence of problems', among patients in long-term heroin-assisted treatment (HAT) for 4 years ($n = 83$).

	Baseline	*HAT year 1*	*HAT year 2*	*HAT year 3*	*HAT year 4*	*Linear-modelled time effect*[a]
	t0	*t1*	*t2*	*t3*	*t4*	*t1–t4*
Absence physical health problems (MAP-HSS < 8)	30.1%	77.1%	86.8%	78.3%	81.5%	1.06 (0.87; 1.30) p|z| = 0.56
Absence psychiatric health problems [SCL-90 < 41 (males) or <60 (females)]	42.2%	77.1%	85.5%	81.9%	87.7%	1.18 (0.95; 1.46) p|z| = 0.13
Illegal activities < 6 days/month	37.4%	96.4%	97.6%	97.6%	100%	1.75 (0.95; 3.21) p|z| = 0.07
Days without personal contact non-drug using individuals < 25 (month) (%)	62.7%	88.0%	94.0%	92.8%	92.6%	1.24 (0.87; 1.77) p|z| = 0.24
No illicit heroin use	0%	57.8%	79.5%	86.8%	86.4%	1.67 (1.31; 2.14) p|z| < 0.0001
No alcohol (≥5 glasses) use	63.9%	71.1%	83.1%	79.5%	77.8%	1.09 (0.92; 1.30) p|z| = 0.32
No cocaine use	21.7%	27.7%	37.4%	43.4%	53.1%	1.40 (1.23; 1.60) p|z| < 0.0001
No amphetamine use	92.8%	96.4%	97.6%	97.6%	97.5%	1.20 (0.67; 2.08) p|z| = 0.53
Health 'recovery'	0%	59.0%	75.9%	65.1%	70.4%	1.09 (0.91; 1.32) p|z| = 0.35
Complete 'recovery'	0%	12.1%	22.9%	24.1%	24.7%	1.24 (1.04; 1.48) p|z| = 0.02

[a]Odds ratios (ORs) [95% confidence interval (CI)] and *P*-values are based on a linear-interval time model, in a longitudinal logistic regression analysis (GEE). MAP-HSS: Health Symptoms Scale of the Maudsley Addiction Profile; SCL-90: Symptom Checklist 90.

“Psychedelic Medicine”

- Produce “non-ordinary” states of consciousness (NOSC).
- Can facilitate recall of forgotten or semi forgotten (or *repressed*) life events.
- Can facilitate a “connection” on an emotional level with others and with surroundings...
- ...meaning that – in the correct setting – the user is more likely to engage in meaningful discussion (“open up”)

“Psychedelic Medicine”

- Psycholytic therapy

  This involves the supervised use of *low to medium* strength doses of a psychedelic substance, usually every 1-2 weeks over a number of months. There is an element of traditional psychoanalysis involved.

- Psychedelic therapy

  This involves supervised use of *high strength* doses of a psychedelic substance. Psychotherapy session before and after the drug experience

“Psychedelic Medicine”

- MDMA:
- Treatment of PTSD
- Relationship counselling
- Possibilities for treating depression, autism, borderline personality disorder and depression currently being investigated.
- Possibilities for using MDMA as an alternative to ECT being investigated.

“Psychedelic Medicine”

- LSD:
- Anxiety associated with end-stage cancer.
- Alcoholism
- Deep trauma

Note: for a number of reasons, LSD research has not been as extensive as the others.

“Psychedelic Medicine”

- Cannabis:
- Potentially hundreds of applications, for both mental *and* physical health.
- Known effectiveness in arthritis, MS, AIDS/HIV etc.
- Known effectiveness as an anti-emetic (so useful e.g. nausea following chemotherapy in cancer)
- Possible use as an antipsychotic.
- Possible use as an antidepressant.
- And so on...

“Psychedelic Medicine”

- The sting in the tail...
- These substances are still illegal in the UK and regarded by the law as having “no therapeutic value”
- Recently however, *Sativex* (a cannabis preparation) has been approved in the UK for use in the treatment of spasticity in multiple sclerosis.

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