PATHWAYS TO HEROIN DEPENDENCE: TIME TO REAPPRAISE SELF-MEDICATION

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The Self-Medication Hypothesis

- Psychodynamic model of substance dependence
- Two formal components
  - *The psychopathology postulate*
    - The genesis of dependent substance use lies in *relief* from distressing psychological symptoms
    - Relief of negative affect, rather than pursuit of euphoria
  - *The drug-specificity postulate*
    - Drug of choice will reflect the ability to ameliorate distressing symptoms
    - Opioids argued to attenuate intense, rageful and violent affect

The psychopathology postulate: Parents, childhood and pathology

- Postulates distress *preceding* the onset of heroin use is the motivator for use

- Highly likely to come from a disadvantaged background
  - More likely to experience abuse and neglect, as well as depression and hopelessness
  - Substance abuse amongst parents many magnitudes those of general population
  - >1/3 at least one substance dependent parent
  - >1/3 parental separation when children

The psychopathology postulate Parents and childhood

- *"Shattered childhood"*
  - Rates of abuse/neglect many magnitudes higher than general population or matched controls
  - Sexual abuse: 1/3-1/2
    - Onset 8-12 yrs
    - Multiple incidents
  - Physical abuse: Similar levels
  - Emotional abuse/neglect: >1/2

- Expect many disorders to first manifest during childhood

The psychopathology postulate
The adult user

- Fundamental that psychopathology be highly prevalent
- ¾ qualify for at least one comorbid Dx
  - MD/Dysthymia: 1/3-1/2
  - Anxiety disorders: 1/3-1/2
  - PTSD 1/2 (lifetime) 1/5-1/2 (current)
- Suicide/Self-harm: *Annual* rate higher than pop. *lifetime* rate
- Personality disorders
  - BPD ≈40%
  - ASPD (CD) ≈50%

The drug specificity postulate

- Heroin almost *never* first drug used
  - Forms part of a suite of drugs, onset late in the sequence
  - Onset 19-20 yrs
  - Use to dependence in 18mths
- Polydrug use
  - Lifetime: 10 drug classes
  - Annual: 6 drug classes
  - Alcohol, cannabis, psychostimulants, BZDs
- Extent of polydrug use predicts poorer clinical profile

Self-medication: An explanation of heroin dependence?

- *Psychopathology postulate*
  - Clinical picture of distressing affect and symptoms
  - Difficult to see how, if SMH not a driving force, the pathogenic childhoods of users could be adequately accounted for

- *Must we view each and every individual use episode as an instance of medication?*
  - Once dependent, other factors such as neuroadaptation and withdrawal relief come into play.
  - Neuroadaptation is *not*, however, an argument against self-medication

Self-medication: An explanation of heroin dependence?

- *Drug-specificity postulate*
  - Appears less sustainable
  - Clinical picture is one of far broader distress than rageful anger

- Appears unnecessary
  - Intoxication *per se* the aim
  - Psychic numbing
  - Extent of polydrug use might fruitfully be considered as a measure of the *extent* of self-medication

Summary

- Self-medication plays a prominent, plausible, role
  - High levels of psychopathology and trauma
  - Onset typically occurs well *before* the use of heroin
  - Passing strange if these events were not causally related
- Drug specificity component tenuous
  - Dependent heroin users are polydrug users
  - NOT essential to the core concept
  - More fruitful avenue maybe to explore the role of polydrug use as self-medication

References

- Darke, S. (2011) *The life of the heroin user: Typical beginnings, trajectories and outcomes*. Cambridge: Cambridge University Press.

- Darke, S. (in press) Pathways to heroin dependence: time to reappraise self-medication. *Addiction*.