
Impulse control disorders

Kleptomania, Pyromania, Gambling disorder

Impulse?

→ A sudden and compelling urge to act, often resulting in action without deliberation

Components of impulse:

- ❑ **Salience** → Becoming the most important thing, occupying thoughts, emotions, behaviour
 - ❑ **Mood modification** (negative if try to resist, at peace when activity is being performed)
 - ❑ **Cravings** for activities, creating problems in everyday functioning (the time spent for planning the behaviour)
 - ❑ Individuals with ICD are unable to resist these impulsive urges, even when they are aware of the negative consequences of their actions
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Griffiths:

Impulse control disorders can be understood as
“addictions that don’t involve substances”

Descriptions of the disorders

Kleptomania - inability to resist stealing object

!!! There is NO material gain

- Around 0.6% in population
- More common in females than males
- Must be distinguished from shoplifting and planned thefts
- Differential diagnosis to be made

Tension before the act → act → relief

- Short term relief and satisfaction, but then → feeling guilt and shame
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Descriptions of the disorders

Pyromania - inability to resist impulse to start fires

- deliberately and intentionally set fires on more than one occasion
- fascinated by fire, equipment for starting and ending fires (fire fighters, fire engines..)
- rare in general population, but: psychiatric inpatients → 3-6% of them meet the diagnostic criteria
- age of onset: young, teenage years
- risk factors: boredom, stress, troubles at home and school
- guilt, co-occurrence with anxiety and substance abuse (>30% are suicidal)

Tension before the act → act → relief

Descriptions of the disorders

Gambling disorder - traditional betting shop, casino, or online lottery

- 4% in the USA
- Reclassified from impulse control disorder to a *disorders due to addictive behaviors*, alongside gaming disorder → produce very similar biological and psychological symptoms like substance addictions:
 - Same brain reward centre is activated when gambling or consuming addictive substances
 - Tolerance
 - Withdrawal symptoms when abstaining from gambling (insomnia, headaches, stomach problems)

Tension before the act → act → relief

Diagnostic criteria for Gambling disorder

To be diagnosed with this disorder, people must demonstrate:

- impaired control over their gambling - where, when and how long they gamble
 - gambling take priority over other daily activities, work, family life
 - person can't stop despite significant negative consequences
 - a pattern of persistent or recurrent gambling will have been exhibited for at least 12 months before a diagnosis is made, although this can be less in severe and obvious cases
 - mania as the possible cause must be eliminated (but other disorders as well)
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Diagnostic criteria for all of them

- Repeated **inability** to resist an impulse (they try multiple times to break away, but can't)
 - **Short term positive** emotion and relief, but **long term negative** emotions and consequences
 - **Tension before the act → act → relief**
 - Monetary gain and other disorders must be **excluded**:
like psychosis, hearing demanding voices, manic episode, low cognitive and intellectual abilities ...
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Measures : K-SAS

Kleptomania Symptom Assessment Scale (K-SAS) :

- 11 - item self-rated scale
- Assessing: impulses, thoughts, feelings and behaviour related to kleptomania in the last 7 days
- Scale goes from 0 -4

Strengths: ✓ quick to administer (only 10 minutes) ✓ test-retest reliability ✓ **concurrent validity** ✓ quantitative data

Weakness: ✗ self reports usual weakness (bias, subjectivity)

1 If you had urges to steal during the past WEEK, on average, how strong were your urges?
Please circle the most appropriate number:

None (0) Mild (1) Moderate (2) Severe (3) Extreme (4)

2 During the past WEEK, how many times did you experience urges to steal?
Please circle the most appropriate number:

None (0) Once (1) Two or three times (2) Several to many times (3) Constant or near constant (4)

3 During the past WEEK, how many hours (add up hours) were you preoccupied with your urges to steal? Please circle the most appropriate number:

None (0) 1 hour or less (1) 1 to 4 hours (2) 4 to 10 hours (3) Over 10 hours (4)

Explanations

Biological



Psychological



Biological explanations

Dopamine - “happy hormone” because it’s released when engaging in pleasurable (or addictive) activities

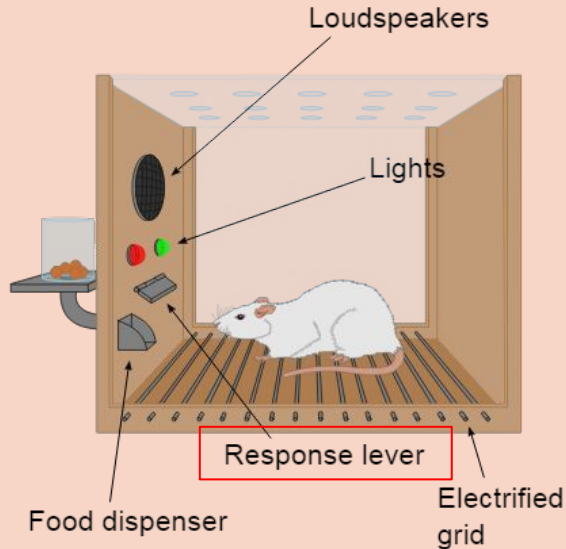
It’s released in specific brain regions called **reward centres**

→ Where are those centres?

→ Where are those centres?

1. Early dopamine research

Olds and Milner (1954) - examined brains of rats placed into a Skinner box.



If the rat pressed the lever, the researcher would electrically stimulate different brain regions to see how this affected the rat's behaviour.

Reward centre in the brain

You don't need to know this centers!

The septal region and the nucleus accumbens each have a high concentration of dopamine receptors and when these regions were stimulated the rats pressed the lever up to 2000 times an hour!

The researchers concluded that **these regions are important reward centres** as stimulation clearly caused the rats to experience a **rush of pleasure** that was irresistible

"This is an example of _____ conditioning , where the consequences of a behavior determine whether it is repeated or not.

Further studies showed that the rats even tolerated painful shocks in order to get to the lever (Olds, 1956)

Biological explanations

2. Anticipation

Additional - animals seem to experience a high level of dopamine activity **before** they perform rewarding behaviours.

Which type of learning is this?

Remember Pavlov and his dogs?

Answer: **classical conditioning** → just seeing the lever (conditioned stimulus) is enough to get the rat to experience a 'high' (conditioned response).

Biological explanations

3. Reward deficiency syndrome

Having generally lower levels of dopamine in brain regions related to reward (rewarding feelings)

Comings and Blum (2000) - low levels of dopamine in brain regions such as striatum as a cause of impulse control disorders

-This deficiency = result of bio + environmental factors

Bio: people with impulse control disorders are more likely to be carriers of the A1 allele of a gene which codes for D2 (dopamine) receptors. This allele is carried by about 25 % of the general population and can result in fewer D2 receptors.

On the other hand people with ICD have A1 allele more often - 51% people with gambling disorder had A1 in one study

Evaluation of biological explanations

Strength: research evidence (that study with 51% gamblers having A1)

Debates:

Applications to everyday life

explaining why people with Parkinson disease sometimes develop ICD (following treatment!)

→ because they are treated with **dopamine agonists**

Nature versus nurture - focusing too much on nature side (weakness)

Determinism versus free will (weakness) - bio explanations minimize importance of personal agency, social support...

Reductionism versus holism (weakness) - similar to above: reducing explanations to domains, alleles → will as a consequence have deterministic approach to treatment

Psychological explanations

BEHAVIORAL EXPLANATION

Skinner's **operant conditioning** theory:

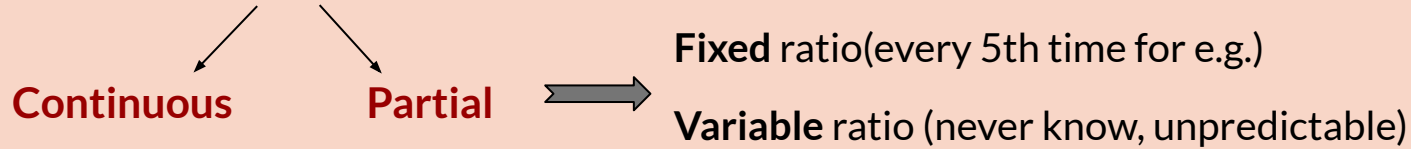
- Positive reinforcement
- Negative reinforcement
- Punishment

} Their effects on establishing or diminishing behaviour

- In Olds and Milner (1954) exp rat's behaviour (pressing lever) was positively reinforced by dopamine secretion
- That happens when to people with ICD when stealing/setting fires/ gambling, plus in gambling - occasional winning or even a near-miss is positive reinforcement for gambling

But if wins are occasional - why they don't stop after losses, which are happening much more often?!

Answer: **schedules of reinforcement**



Variable ratio schedules are known for producing high rates of responding and **strong resistance to extinction**. <https://www.youtube.com/watch?v=3xNggCrTWUo>

Strengths and weaknesses of behavioral explanation

✓ Adding balance to nature - nurture explanations - nature (A1) receptors cannot explain all cases

✗ This explanation didn't include **NEGATIVE REINFORCEMENT** - reducing anxiety (aversive stimuli) by impulsive behavior (gambling, fire setting or stealing)

COGNITIVE EXPLANATION: Miller: Feeling - state theory

You don't need to know addictive and context dependent memories from the book

Cognitive theories focus on underlying thoughts and beliefs.

Miller introduces concepts like "**state-dependent memory**" and "**feeling state**":

- *State-dependent memory*: recall influenced by internal states (feeling happy - gonna remember happy things from the past and opposite)
- *Feeling state*: **intense emotions, sensations and thought tied to specific behaviors** (e.g., gambling).

According to Miller, **positive emotions can attach strongly to behaviors**.

Example: **Gambling** can link to:

- *Euphoria and excitement*
- *Positive thoughts*: "I'm winning, I'm powerful"
- *Physical sensations*: Racing heart, adrenaline

These feeling states can drive impulsive behavior due to this powerful link.

Positive feelings make certain behaviors **addictive and compulsive**:

- People seek to feel strong, in control, and positive.
- Without these positive feelings, behaviors would likely be avoided.
- *Addiction forms as positive feelings become bound to behavior.*

But.. **Picture is more complex and there are probably some deeper negative beliefs**

- **Underlying negative beliefs** often exist, such as:
 - *“I am powerless” or “I am weak.”*
 - These beliefs are **mostly unconscious**.
 - To cope with anxiety triggered by these beliefs, **individuals turn to behaviors** that make them feel powerful.
-

So - how it usually goes then?

1. Negative beliefs trigger anxiety.

- Lacking healthy coping tools, the individual:

2. Engages in behavior to evoke the opposite feeling, like power.

- Uses behavior (e.g., fire-setting) to re-experience the "feeling state."

Result: Repetitive, impulsive behavior.

But in the long term these behaviors only create more negative beliefs, negative emotions such as guilt and shame. So it puts an individual into a vicious cycle.

Belief type	Example of belief
Negative belief about oneself or the world	'I'm a loser'
Positive belief created during event (e.g. gambling)	'I'm a winner'
Negative belief created from out-of-control behaviour	'I mess up everything'

Table 6.3: Beliefs associated with impulse control disorder

Strengths and weaknesses of cognitive explanation

- Evidence for: case studies like John's gambling disorder experience ✓ 292 page in book

But it's a case study, so it may lack generalizability due to the uniqueness of individual circumstances

- More evidence: O'Guinn and Faber's research on compulsive shoppers demonstrates the role of feeling-states in reinforcing compulsive shopping behaviors

Issues and debates:

both individual and situational factors taken into account

Explanations that emphasise interactions between multiple factors provide a more holistic perspective and this is often helpful in identifying a variety of possibilities for treatment

Treatments

- Biological
- Psychological



Biological treatments - **Key study by Grant:** Gambling disorder with drugs and placebo (2008)

Context

LEARN CONTEXT FROM HERE, NOT FROM THE BOOK

Previous research shows that **opiate antagonists** can be a successful treatment for gambling disorder. Which individual differences will predict treatment outcome is however, unexplored.

Main theories and explanations

Opiate antagonists - traditionally used to treat substance addictions.

- work by reducing the response of the reward centre in the brain
- this **reduces the urges** and **extends the periods of abstinence**

Opiate antagonists have been shown to be effective treatments for alcohol dependence (O'Brien 2005, Monterosso et al., 2001). Alcohol dependence is genetically linked to gambling disorder, and the two often occur alongside each other.

Aims and hypotheses

Aim - to identify factors associated with treatment (opiate antagonists) outcomes in patients with gambling disorder.

1ST factor believed to be important: **family history of alcoholism**

2ND factor: **stronger urges** to gamble

3RD factor: **alcohol consumption creates an euphoric response**

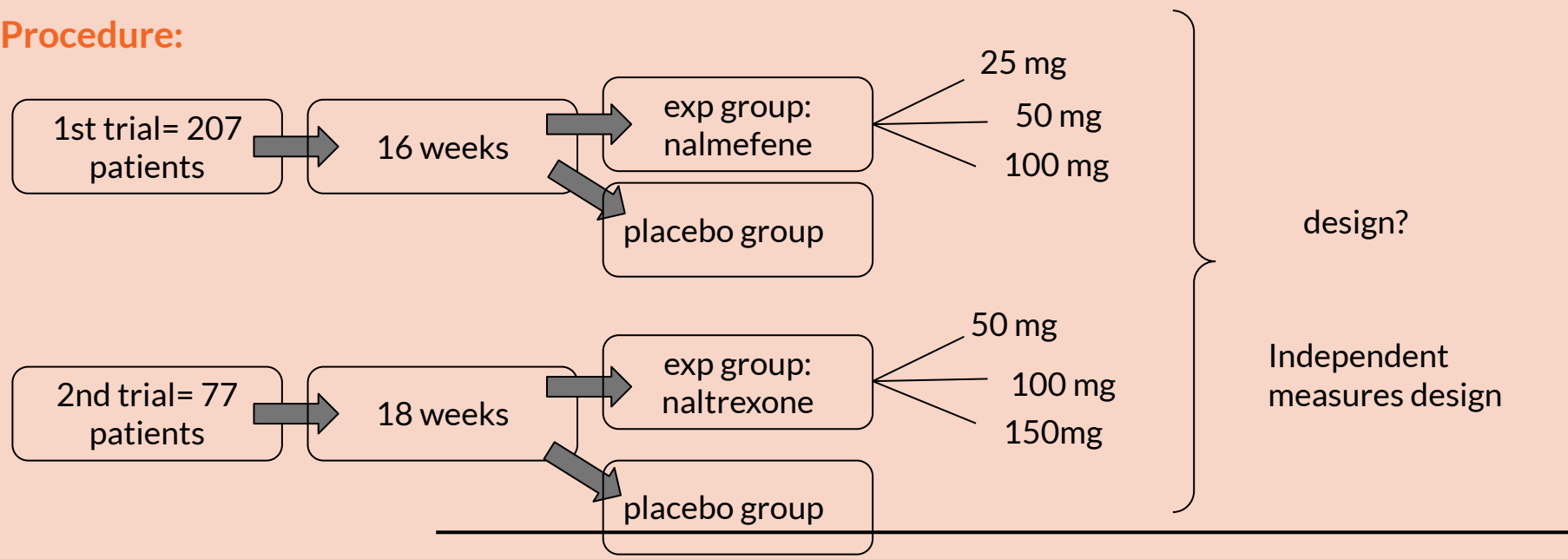
Hypothesis 1: Opiate antagonists will be more effective for people with a family history of alcoholism, stronger urges to gamble, and feeling euphoria in response to alcohol.

Hypothesis 2: People with less severe urges would be more likely to respond positively to a placebo than those with more severe.

Design - 2 double blind placebo trials (2 different drugs were tested)

Sample: in total 284 patients; 48% F, 52% M; all participants were from the USA

Procedure:



Both trials were double-blind, meaning _____? neither the participants nor the investigators knew who was taking the placebo and who was taking the active drugs

Measures:

- main measure - the severity of gambling disorder symptoms assessed with modified **YBOCS** before and after treatment

YBOCS stands for Yale-Brown Obsessive-Compulsive Scale

→ a decrease of more than 35 % was classified as a positive response to treatment

- other measures - daily functioning, anxiety, and depression - **questionnaires**
 - family history of psychiatric diagnoses, including alcoholism in first-degree relatives - **semi-structured interview**
-

Results

1. a **family history of alcoholism** was robustly (strongly) associated with a positive response to treatment outcome.
2. **Stronger urges to gamble** - mildly associated with positive treatment response to the higher doses of both drugs.
3. **Age** - Younger participants were more likely to respond positively to the placebo (which was 30 per cent less effective for every ten years in participant age)

Conclusions

The researchers concluded that a family history of alcoholism and strong gambling urges seem to predict a positive response to opiate antagonists in treatment of PG. Although further research should be carried out to investigate whether there are genetic or other specific factors involved, this is really useful in determining who may respond best to opiate antagonist treatment.

Evaluation

Strengths ?

Double blind placebo trial
improves _____?

Blind meaning = gambling symptoms were assessed before and after treatment (by YBOCS) administered by researcher who was unaware of conditions (placebo - medicine)

Double blind = ?

Representative sample

Genders were balanced, but
what wasn't?

15 different clinics, wide age range (19-72), different ethnicities, marital statuses, employment statuses

Weaknesses?

1.How they found out about family history of alcoholism?

Self-reports, haven't check medical records

2.How they checked long term effects of medicine?

They didn't

Psychological treatment - Covert sensitisation

- Learning approach and learning theories
- Using principles of classical conditioning and evaluative learning

Visualise **disturbing images (US)** to create **unpleasant feelings (UR)**

Pairing **US** with **NS (thoughts of target behaviour)** in order for NS to become CS and provoke CR



Translation? Anybody?

Example study = case study by Glover

Sample: women suffering from kleptomania, 56 yo

Trigger event? Husband accused of stealing and lost the job

Procedure: 4x covert sensation sessions (took 2 months)

Instructed to imagine vomiting as thinking about stealing

But, in order for this to be a deeply immersive experience:

Muscle relaxants meds + Hypnosis were used

Follow ups after 3, 9 and 19 months post treatment

Results (detailed):

Months since therapy began	Progress
After four sessions over two months	Preoccupation with stealing and urges to steal were reduced; she stole on two occasions, taking five low-value items from four shops; in comparison with her previous daily stealing this was a vast improvement.
Three-month follow-up	She continued the homework exercises several times a day, visualising the unpleasant imagery; she was becoming more confident to shop alone.
Nine-month follow-up	She stole a bar of soap from a chemist's supermarket; she said this did not relieve tension as it once would have done.
Nineteen-month follow-up	No further relapses; more cheerful, confident and outgoing, no longer shunning social contact due to shame, shopping alone, rarely thought about stealing; if she did think of stealing, it was no longer overwhelming; it made her feel unwell but this was relieved by walking away from tempting items.

Conclusion:

Glover says it is impossible to know exactly which aspects of the therapy were most effective in helping the woman to overcome her kleptomania but states that, in the woman's opinion, her urge to steal was reduced by her ability to clearly imagine the unpleasant scenes.

Evaluation of Glover and Covert sensitisation as treatment

Covert sensitisation:

- ✓ Those case studies support the use of CS technique
- ✓ Uncomfortable at beginning , but better then experiencing side effects of medication
- ✗ Will not help everyone (must be: motivated, able to fully immerse in imaginative experience..)

Glover:

- ✗ not generalisable
 - ✓ idiographic approach (useful insights in the case and implications for therapy effectiveness)
 - ✓ evidence (another case study but with 31yo man)
-

Psychological treatment - Imaginal desensitisation

Here the focus is on specific environmental cues that trigger irresistible urges. Imaginal desensitisation **aims to reduce arousal relating to the triggers** (and consequently reduce the strength of these urges)

Elements:

1. Progressive muscle relaxation (PMR), a breathing relaxation technique (once learned with a therapist, it can also be applied in any triggering situation)

→e.g. of a trigger - a shopping bag that has been previously used for stealing

2.Guided imagery (explained on the next slide)

3. Homework - to continue guided imagery at home (throughout the week) and record their progress

! often

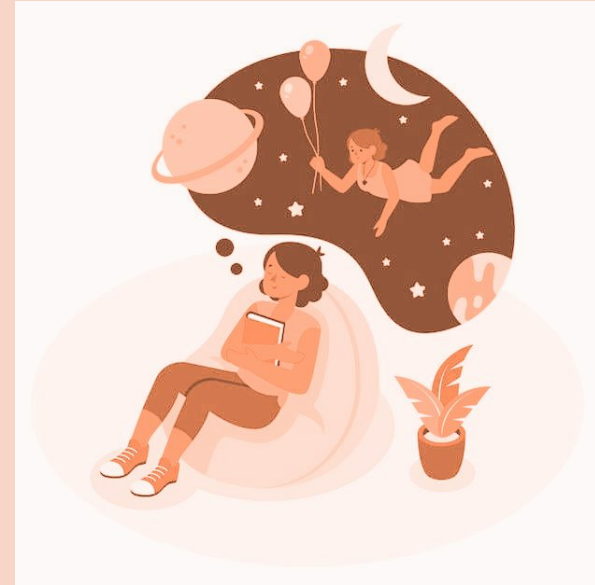
Guided imagery

purpose - to ease arousal from the triggers, making way for alternative, more adaptive responses

- highly personalized and scripts are typically written for each client based on their own personal circumstances
- designed to evoke a range of feelings and thoughts, ultimately emphasizing the negative consequences of the behavior

The client listens to the script (approximately 20 minutes long; usually has six stages: in office with a therapist, but also at home via audio tapes)

How do therapists design a script?



Example study : Blaszczynski and Nower (2003)

Participant > 52 yo women, addicted to gambling, by being in this case study we learn a lot about her life, possible roots and triggers for her disorder

The purpose of this study is just to illustrate how therapists should approach when creating guided imagery scripts - Blaszczynski and Nower suggest everything that I put on the previous slide. They don't provide any results, it's completely an example how to create a guided imagery.

Takeaway: individualistic approach and lot of details about patients in order to make a successful script

Evaluation of imaginal desensitisation

✓ **Fast, cost-effective, practical** - clients may only have 2-3 three face-to-face sessions with the therapist. They are thought to practice this at home and continued practice is what will help them (eventually a follow-up session to check for symptoms improvement)

✓ **supported by research evidence** - 80% of people with gambling disorder found long-term relief following six sessions of this therapy (Grant et al., 2011)

✗ As always with psychotherapy - **certain individual characteristics must be present in order to be successful** - motivation, being organized and doing homework as said, being able reach a state of deep relaxation, and therapy takes a good deal of effort..

→ the Blaszczynski and Nower (2003) study suggests that imaginal desensitisation may be less effective for people with attention deficit disorder or comorbid disorders, including depression