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CIE A2-LEVEL PSYCHOLOGY 9990

SUMMARISED NOTES ON PSYCHOLOGY AND ABNORMALITY

TABLE OF CONTENTS

PSYCHOLOGY AND ABNORMALITY

1. SCHIZOPHRENIC AND PSYCHOTIC DISORDERS

Schizophrenia outlines a range of psychotic disorders that affect all aspects of a person's thinking, emotions, actions, along with a major break from reality. The personal, social and occupational functioning deteriorate because of disturbed thought process, unusual emotions and motor abnormalities.

1.1 Types and characteristics

Types

- **Simple:** gradual withdrawal from reality
- **Paranoid:** having delusional thoughts and hallucinations
- **Catatonic:** no response to the environment; would remain rigid/unmoving or would engage in constant repetitive movements.
- **Disorganised:** thoughts and speech are jumbled and impossible to understand (word salad).
- **Undifferentiated:** has symptoms but doesn't fit into above categories

The DSM-5 outlines the following psychotic symptoms:

- **Positive symptoms:** additional symptoms to normal behaviour e.g:
  - **Delusions:** non-realistic beliefs eg. believing someone will harm/kill you.
  - **Hallucinations:** false sensory experiences eg. hearing voices.
  - Disorganised thoughts and catatonic behaviour
- **Negative symptoms:** symptoms that lack aspects of normal behaviour eg. loss of speech, withdrawal from society, or loss of typical facial expressions (flat affect).

1.1.1 Case studies: Conrad (male aged 23)

- First psychotic episode at 22 and later diagnosed with schizoaffective disorder (symptoms of schizophrenia + mood disorder).
- After 8 months of being admitted at a psychiatric hospital, a treatment was eventually found through trial and error, although maintaining healthy weight was challenging.

1.1.2 Delusional disorder

- When a person experiences persistent delusion (for a month or longer) but otherwise has normal behaviour.
- It excludes positive or negative psychotic symptoms.
- **Types of delusional disorder:**
  - **Erotomanic**: belief someone is in love with you.
  - **Grandiose**: belief that they have great unrecognised skill or status.
  - **Jealous**: belief that partner is unfaithful (paranoia).
  - **Persecutory**: belief that people are conspiring against or want to harm you (paranoia).
- **Bizarre delusion:** logically impossible.
- **Non-bizarre:** possible but unlikely.

1.1.3 Symptom assessment using virtual reality (Freeman, 2008)

- Freeman explores the potential for VR to eliminate challenges such as misinterpretations of social interaction (leading to paranoia, withdrawal etc) when checking symptoms and developing treatment for schizophrenia.
- **Typically**, symptom assessment involves the interviewer and patient sitting in a clinical room, discussing behaviour over the past week/month – however this heavily relies on the patient answering truthfully.
- **Using VR:**
  - The assessment can be novel and standardised
  - Patients are presented with an artificial and neutral social situation with unresponsive avatars, so that any paranoid thought is unfounded (having no basis) and genuine. This allows us to assess the severity of paranoid delusions.
  - The situation can easily be manipulated and the patient's behaviour monitored
  - **Can be used to develop a treatment as:**
    - Factors that worsen/improve the patient's condition can be identified
    - Patients can be exposed to persecutory fears in the environment via VR so that they can learn to cope with it (or with the symptoms) in reality
- **Procedure in Freeman's study:** user takes a walk or a ride in a specifically designed library or underground train scene amongst neutral avatars, whilst wearing VR headgear.
- **Sample:** trialled on non-clinical population of 200 students.

- **Before test:** multiple validated measurement tools (such as the 16 item Green Et al. Paranoid Thoughts Scale (GPTS) Part B) were used to assess user's paranoid thinking, emotional distress and other social and cognitive traits.
- **After test:** persecutory thinking, visual analogue rating scale (used to measure frequency of symptoms) and degree of immersion in virtual environment was taken.
- **Result:**
  - High score on paranoia assessment questionnaire had high levels of persecutory ideation.
  - Individuals who experience auditory hallucinations in real world experienced them in VR too.

Evaluation:

- Large sample but no clinical population.
- VR used a standardised approach to assessing symptoms, hence increasing reliability of measurement.
- Low ecological validity as the environment is simulated.
- Use of self-reports may lead to response bias.

Issues and debates:

- **Relevance to everyday life:** identify symptoms, causal factors and treatment strategies.
  - Not used extensively in clinical populations, so it is yet to be determined whether it can replace clinical interviews and questionnaires in diagnosis.
- **Cultural bias:** relies on culturally based expectations of what determines normal social behaviour. Different cultures have different interpretation of normal behaviour, so these factors need to be considered when diagnosing symptoms and behaviour to avoid biased results.

1.2 Explanations

1.2.1 Genetic (Gottesman & Shields, 1972)

- They believe that there is a genetic relation with a schizophrenic which can be inherited.
- They believed that a series of genetic abnormalities cause symptoms like psychosis, and these have genetic origins called endophenotypes (genetic markers with known location used to identify individuals) that could be inherited.
- To test this, they carried out a longitudinal twin study in monozygotic (identical twins sharing all their DNA) and dizygotic (fraternal sharing 50% of DNA) twins to test genetic concordance of schizophrenia.
- **Sample:** 57 pairs of twins (24 MZ, 33 DZ) were drawn from 467 twins registered at Maudsley Hospital (London).
  - Twins were identified as MZ/DZ through blood group and fingerprint analysis.
  - Parents and twins were interviewed, some of whom were diagnosed with schizophrenia.
- Participants took cognitive test like object sorting (?)
- Case summaries of each participant were independently evaluated by external judges to find co-twin schizophrenic concordance.
- **Results:**
  - MZ twins share 50% schizophrenic concordance; DZ have only 9% concordance.
    - **Concordance:** presence of observable trait/disorder in both co-twins.
  - In MZ twins, twin 1 was more likely to be schizophrenic if the illness of twin 2 was severe.
  - In mild illness, co-twin concordance is far lower.

Evaluation:

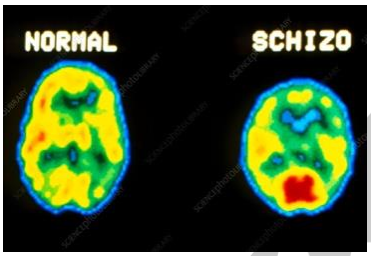
- Large sample; generalisable to twins but not to non-twins.
- Assessment made by independent judges, reducing researcher bias.
- Qualitative data collected such as interviews (in-depth), although it is more subjective.

1.2.2 Biochemical (dopamine hypothesis) (Lindstrom et al., 1999)

- The hypothesis states that brains of schizophrenic patients produce/transmit excess dopamine, have increased amounts of dopamine receptors, or have receptors with increased sensitivity to dopamine, which disrupt the normal transmission of nerve impulses and are linked to positive symptoms.
- It is thought that excess dopamine in specific brain areas e.g. Broca's region (responsible for formation of

language), can lead to certain symptoms e.g. impair logical speech.

- Drugs that increase dopamine levels (amphetamine and cocaine) are correlated with hallucinations and delusions.
- **Parkinson's disease** is treated with a synthetic form of dopamine called 'L-dopa'. If dosage is too high, it creates symptoms identical to schizophrenia e.g. hallucinations.
- Post mortem studies, brain scans and autopsies have shown that schizophrenic patients have larger number of dopamine receptors than usual.
  - **Wise et al. (1974)** found low levels of enzyme that break down dopamine in brain fluid, thus increasing its quantity.
- **Positron Emission Tomography (PET):** uses gamma cameras to detect radioactive tracers e.g. glucose in blood. Tracer accumulates in areas of high activity, showing visibility during analysis.
  - High number of dopamine receptors in striatum, limbic system and cortex, indicating high dopamine activity contributing to positive symptoms; low levels in prefrontal cortex indicates negative symptom (flat affect).



1.2.3 Cognitive (Frith, 1992)

- Frith emphasises the importance of faulty mental processing rather than relying solely on physiological explanations.
- He describes schizophrenia as an abnormality of self-monitoring.
- He wanted to test the idea that schizophrenic patients confused inner-talk with hallucinations.
- Thus, he asked patients to decide whether items that were read out aloud were done so by themselves, an experimenter or computer.
- Patients with incoherent speech performed worst, which may be linked to memory and attention difficulties, crucial to self-monitoring.
- Delusional thinking may be an outcome of misinterpretation of perception
  - Eg. traffic lights turning red may be interpreted as the Martians are about to land.
- Applying logical reasoning to hallucinations results in delusions.
  - E.g. you have an auditory hallucination where you constantly hear 'die' – adding logical reasoning to it: 'I stole his girlfriend so he's out to kill me' leads to paranoia and persecutory ideation.
- Failure in monitoring results in auditory hallucinations, alien control and thought insertion.
  - **Alien control:** misattribute self-generated actions to an external source.
  - **Thought insertion:** feeling as if one's self generated thoughts are not one's own, but rather have come from an external source, and have been inserted into one's mind.
  - **Auditory hallucination:** inner speech is not recognised as self-generated and is instead attributed to an external source.
- Inability to monitor intentions of others, perhaps due to impaired theory of mine, can lead to paranoia and incoherence.
- Frith says that negative symptoms are a result of the individuals' impairment to produce spontaneous actions and that external stimuli are required for a response to be produced
- Flat affect, social withdrawal and lack of speech result from difficulty in monitoring mental state.

Issues and debates:

- **Nature vs Nurture:**
  - Longitudinal twin study found causal link between genes (nature) and mental disorder.
  - However, MZ twins are treated more similarly than DZ twins as they are always the same gender and look more alike, unlike DZ twins that are treated like ordinary non-twin siblings. Thus, differences between MZ and DZ could also be due to nurture.
- Biological and biochemical explanations are considered **reductionists** as they attribute the cause of schizophrenia to a specific biological origin.
  - For biological explanation, it is genes or gene combinations.
  - For biochemical explanation, it is disruption of normal uptake of a specific neurotransmitter – dopamine.
  - However, they do consider that environmental factors are important to the onset of the disorder.

- Cognitive by Frith is more **holistic** as it considers both mental processing as well as biological causes, but could still be said to ignore environmental and social causes.
- These are all pointing towards individual explanations, unlike psychologists from social or psychodynamic traditions. They would look towards situational factors such as traumatic events or difficulty forming early relationships.

1.3 Treatment and management

1.3.1 Biochemical

- **Antipsychotic drugs:** 1st generation antipsychotics (1950s) such as chlorpromazine/Thorazin block dopamine and serotonin receptors in the cortical and limbic areas of the brain. They also have an impact on neurotransmitters such as serotonin and norepinephrine, depending on the antipsychotic.
  - Their effectiveness has been researched via **randomised control trials (RCT)**; each participant is randomly allocated to the control or experimental group, and results are compared.
  - These trials are **double-blind placebo controlled**, meaning neither the groups, nor the researchers know who is getting the treatment and who is getting the placebo.
  - 50% of patients taking antipsychotic drugs show significant improvement after 4-6 weeks, 30-40% show partial improvement, and a minority show no improvement (treatment resistant schizophrenics).
  - **High relapse rate:** patients are directed to take (low dosage) medications even in periods of remission; as the symptoms start reducing, they stop taking medication to prevent side effects, leading to relapse.
  - **Unpleasant side effects:** weight gain, drowsiness, extrapyramidal symptoms (EPS) and tardive dyskinesia (TB). The latter two affect motor control, resulting in involuntary spasms and abnormal face and body movement. These side-effects may result in **non-adherence to medication.**
- **Atypical antipsychotic drugs:** 2nd generation antipsychotics (1990s) which are as effective as 1st generation antipsychotics, but are less likely to produce EPS and TB. Instead, they increase risk of weight gain and obesity, which can lead to heart disease and diabetes.

1.3.2 Electro-convulsive therapy (ECT)

- Using electricity via electrodes to pass on a small current to induce seizures to treat psychiatric problems.
  - This would however be without the use of anti-anxiety drugs or anaesthesia; thus, patients would be traumatised and suffer with broken bones.
  - **Modern ECT:** pass electricity to induce seizures, which is the treatment rather than the electricity itself as it aims to 'restart' the nervous system and affects the release of neurotransmitters in the brain.
    - Treatment ranges from 6-12 sessions, typically given twice a week, or less commonly at longer intervals to prevent relapse.
    - It is applied unilaterally to the non-dominant hemisphere to reduce memory loss.
    - **Risks:** affect the central nervous system (CNS) and cardiovascular system, can lead to memory loss (usually temporary), neurological damage, and even death.
  - **Use of ECT:**
    - Can be effective during acute episodes of psychosis where fast, short-term improvement of severe symptoms is needed.
    - Most effective for individuals with catatonic symptoms.

1.3.3 Token economy (Paul and Lentz, 1977)

- Behaviourists consider schizophrenic symptoms as a learned response which can be unlearnt via operant conditioning (learning through consequences).
  - 84 individuals with chronic (long term/ongoing occurrence) admission to psychiatric institution were split into different treatment groups.
  - Independent groups design was used to compare outcomes of 3 different forms of treatment over 4.5 years:
    - **Milieu therapy:** involves the use of a therapeutic community, where patients live collectively and are encouraged to look after one another, promoting social wellbeing. 71% of this group could live independently.
    - **Traditional existing hospital management:** 45% of this group could live independently.
    - **Token economy system:** Patients were given a token for appropriate behaviours e.g. self-care, attending therapy and engaging socially. The tokens had no value, but could be exchanged for luxury items e.g.

clothing, sweets, TV use. This system reinforced desirable behaviours. 97% of this group could live independently.
- Behaviour of the groups were monitored through time-sampled observations, standardised questionnaire scales and individual interviews.
- The system was most effective at reducing catatonic behaviour and social withdrawal but less successful in reducing hallucinations and delusional thinking.

1.3.4 Cognitive-behavioural therapy (Sensky, 2000)

- A talking therapy designed to improve the person's ability to function independently, manage/cope with schizophrenia, and reduce stress by identifying thoughts which underline their behaviour and the emergence of their disorder. It mainly targets treatment-resistant schizophrenics and incorporates both cognitive and behaviourist approaches.
  - **Randomised control trial (RCT):** patients randomly allocated to the CBT group or the 'befriending' control group, making it an independent groups design.
    - **Befriending sessions:** one-to-one discussions about hobbies, sports or current affairs.
  - **Sample:** 90 treatment-resistant schizophrenics from 5 clinical services received a mean average of 19 sessions of CBT/befriending.
  - **Procedure:** CBT treatment included experienced nurses engaging with the patient, discussing emergence of disorder before tackling symptoms e.g. patients experiencing auditory hallucination engaged in joint critical analysis with nurse to challenge beliefs about nature and origin of voices.
  - Patients kept voice diaries to record what they were hearing to generate coping strategies.
  - Participants were assessed via blind raters before treatment, at treatment completion and at a 9-month follow-up.
    - **Blind raters:** those rating the treatment group were blind to the treatment.
  - Comprehensive Psychiatric Rating Scale (CPRS) and Scale for Assessment of Negative Symptoms (SANS) were used to access the positive and negative symptoms.
  - **Results:** both groups showed reduction in positive and negative symptoms but at follow up stage, CBT continued to show improvements in positive symptoms unlike the befriending group.

Evaluation

- **Token economy (Paul and Lentz):**
  - Involved intensive staff training to ensure rewards were administered **reliably**.
  - Staff were monitored and issued with a manual to ensure procedures were **standardised**.
  - Stern and consistent enforcement in other hospitals and the outside world may not be possible, lowering **ecological validity**.
  - Good behaviour ceases when rewards go away, making therapy hard to be applicable to reality.
  - **Ethical issues**: denying privileges to patients that do not behave appropriately will make them demotivated and distressed.
- **CBT (Sensky et al):**
  - Use of RCT reduces bias and increases **validity**.
  - Assessors were blind to the treatment they were assessing, reducing any **bias**.
  - **Representative** sample obtained all over the UK
  - Both nurses were highly trained, increasing **standardisation**.

Issues and debates:

- There is application to real life.
  - Biochemical treatment (antipsychotics) is the primary treatment for the disorder and is effective to reduce positive symptoms.
  - Reduces hospitalisation and improves quality of life.
  - ECT is less effective and is mostly used in urgent, acute cases with primarily catatonic symptoms.
  - Token system requires specific conditions, training and enforcement by clinical staff.
  - Effectiveness of CBT is significant, may be used when patients don't respond to antipsychotics.

2. BIPOLAR AND RELATED DISORDERS

2.1 Characteristics

- **Abnormal affect:** abnormal disorders such as unipolar depression and bipolar disorder that are classified as mood disorders in DSM-5.
- **Characteristics:** emotions are amplified beyond the normal ups and downs, in either extremes (positive or negative), for a long period of time (at least 2 weeks) and not allowing to function normally. It should not be

related to another disorder, caused by grief or substance abuse.
  - At times they may experience strong feelings of despair and emptiness, other times they may feel anger or euphoria.
- **Depression (unipolar):**
  - Long period of sadness, despair and pessimistic spirit
  - Loss of interest in enjoyable activities
  - Struggling to concentrate or remember easily
  - Withdrawing from activities or friends
  - Fatigue or lethargy
  - Finding it difficult to make decisions
  - Change in appetite (including weight loss or gain) or sleeping patterns (insomnia or excessive sleeping)
  - Considering or attempting suicide
  - Psychomotor agitation like pacing and handwringing.
- **Mania (bipolar):** having swings between depressive and manic symptoms. The feelings of happiness that are accompanied by a manic state may not lead them to believe anything is wrong.
  - Long period of feeling euphoric or 'high'
  - Rage; irritability
  - Becoming easily distracted, having racing thoughts
  - Sudden interest in new activities or projects
  - Over confidence in one's abilities
  - Social
  - Delusional ideas
  - Speaking quickly
  - Sleeping less or appearing not to need sleep
  - Engaging in risky behaviours (gambling, multiple sexual relationships)
- **Beck Depression Inventory:** a form of psychometric testing to measure depression.
  - Consists of 21-item questionnaire to assess attitudes and symptoms of depression.
  - Each item consists of at least 4 statements, of which one can be chosen that best fits how they've been feeling during a recent period.
  - **Example item:** satisfaction
    - I get as much satisfaction out of things as I used to (0)
    - I don't enjoy things the way I used to (1)
    - I don't get real satisfaction out of anything anymore (2)
    - I am dissatisfied and bored with everything (3)
  - After scoring each item from 0-3, the results are totalled and evaluated as:
    - **Mild depression:** score of 10
    - **Moderate depression:** 19-29
    - **Severe depression:** >30

Evaluation:
  - It has high **validity** and **reliability** as it is an accurate and consistent measure of depression.
  - **Quantitative** measurement as it provides a numerical score, increasing objectivity.
  - Allows clinicians to measure deterioration or improvement of depression with treatment.
  - It cannot capture detail and richness that a less structured approach could.
  - Validity may be at risk as there could be **response bias.**
  - Depressive patients may exaggerate their responses which will not be an accurate representation of how they are feeling.

Issues and debates:
  - BDI is an important diagnostic tool and has **application.**
    - Can be used to diagnose and treat depression.
    - Can help identify patients with high risk of suicidal thoughts and death.
    - Adapted for use with children below age 13 who suffer from depression.

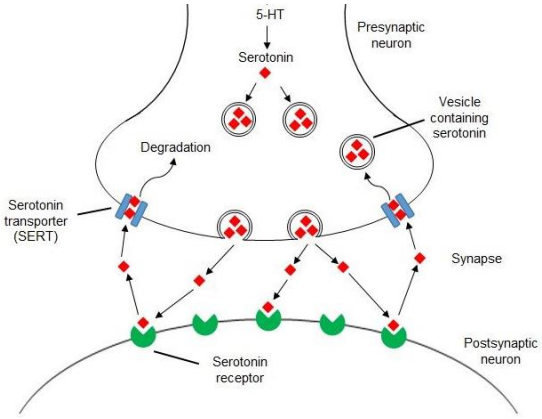
2.2 Explanations of depression

2.2.1 Biological: genetic and neurochemical (Oruc et al. 1997)

- **Genetic:** some illnesses have a genetic basis and can be transmitted from one generation to the next. First degree relatives (parents and siblings) share 50% of their DNA.
  - MZ and DZ twins can be used to investigate whether there is a genetic link in depression.
- **Neurochemical:** imbalance of chemicals affect the functioning of the brain and consequently the mood. Depressed individuals have low activity of serotonin and norepinephrine neurotransmitters.
- **Sample:** 42 participants (25F, 17M), diagnosed with bipolar disorder, aged between 31-70, were drawn from two psychiatric hospitals in Croatia.
  - A healthy control group of 40 participants with no personal/family history of mental disorders were also included (they were also match for sex and age).
- 16 of bipolar participants had a first degree relative with major disorders.

- This information was gathered by participants, their families and medical records.

- **Procedure:** DNA testing was carried out to test for **polymorphisms** (gene variation) in serotonin receptor 2c (5-HTR2C) and serotonin transporter (SERT/5-HTT) genes.

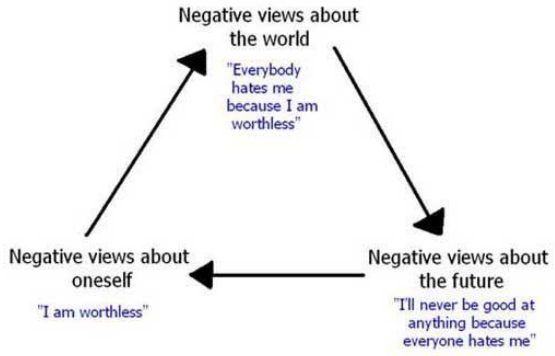


- **Results**:
  - There were no significant differences between the two groups.
  - However, serotonin (5-HT) is sexually dimorphic, and females had trends of polymorphism in the serotonin genes, which could be responsible in increased risk of bipolar in females.
    - **Sexually dimorphic:** any differences in males and females of a species, excluding organs and genitalia.

2.2.2 Cognitive (Beck, 1979)

- Beck was interested in investigating the irrational thought processes in depression.
- The reason for an individual's low mood is due to **incorrect information processing.**
- The negative views of a depressed person form a reality for them.
- This form of irrational thinking is called **cognitive distortion**, which is an automatic process that develops as a result of earlier life experiences through **schemas** (knowledge/memory)
  - Negative events and schemas activate the underlying negative assumptions and create pessimistic thoughts and beliefs about the future.

Cognitive triad:



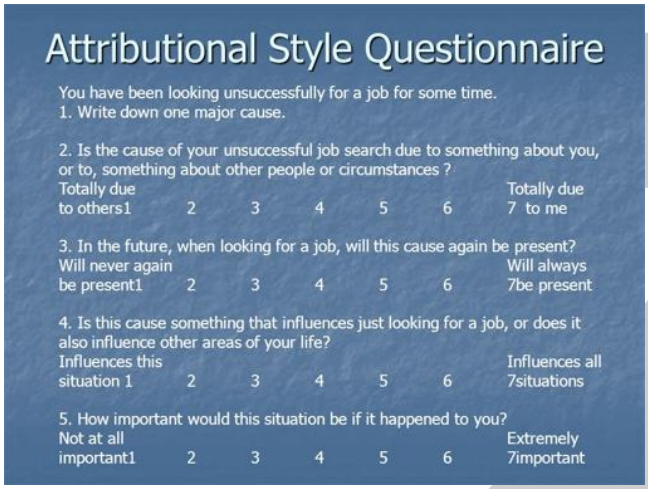
- This leads to impairment in perception, memory and problem solving- the person is constantly overwhelmed with negative thoughts.

2.2.3 Learned helplessness and attributional style (Seligman et al. 1988)

- A behaviour that occurs as a result of a person having to endure an unpleasant situation which they perceive as inescapable.
- Seligman et al's view is that depression is a direct result of real/perceived lack of control over the outcome of one's situation – they feel helpless.
- The individual learns that they are unable to control the situation and cannot prevent suffering and so eventually cease to resist it.
- **E.g.** in Seligman's 1974 research on dogs, they received electric shocks preventing them from escaping (experienced lack of control). They accepted the situation and eventually stopped trying to escape. In future trials, they had an opportunity to escape, but due to past experience, they did not try.
- **Attribution:** cognitive process wherein individuals explain the causes of events and behaviour. It may be faulty/biased as it is based on previous life experiences.
- A person who has had a difficult upbringing/experienced parental loss for e.g., will have learned helplessness and ∴ be inclined towards **negative attributional style.**
- **A negative event can be attributed as:**
  - Internal (personal)/ external (environment)
  - Stable (occasional)/ unstable (constant)
  - Global (affecting many aspects)/ specific (affecting one aspect)
- **Investigation:** how well attributional style could predict depressive symptoms.
- **Sample:**
  - 39 patients with unipolar depression

- 12 with bipolar disorder during a depressive episode from the same clinic.
- Included a mix of genders with a mean age of 36.
- They were compared with control group of 10 participants.

- **Procedure:**
  - All participants completed BDI to assess severity of symptoms
  - Then, completed an Attributional Style Questionnaire (ASQ) consisting of 12 hypothetical good and bad situations.
  - They had to make causal attributions for each event and rate the cause on a 7-point scale for internality, stability and globality.



Note: question 2 is about internal/external, Q3 about stable/unstable, Q4 about global/specific.

- **Results:**
  - Bipolar and unipolar patients had more pessimistic, negative attributional styles than the control group.
  - The more severe the score on BDI, the worse the pessimism on ASQ.
  - For those with unipolar depression undergoing cognitive therapy, an improvement in attributional style correlated with an improvement in BDI score.
  - Thus, the way we make attributions is an important underlying mechanism of depression.

Evaluation

- **BDI and ASQ:**
  - Standardised measures used e.g. using the BDI and ASQ which are both **valid**.
  - Positive correlational between BDI and ASQ does not indicate a causal relationship.
- **Oruc et al (biological explanation):**
  - Limited sample size so difficult to generalise; genetic studies require a large sample to be valid and accurate.
    - Establishing the importance of serotonin-linked genes in increasing risk of depressive illness in females requires a large sample.
  - DNA samples were collected and analysed in a lab with automatic equipment, increasing **validity** and removing researcher bias.
- **Nature vs nurture:**
  - Biological explanation for depression reflects nature e.g. Oruc et. al.
  - Other explanations for depression e.g. adverse life events are more nurture based e.g. learned helplessness.
- **Individual vs situational:**
  - **Individual:** cognitive explanation assumes that depression arises due to dysfunctional thinking of the individual, rather than as a result of situational variables e.g. difficult childhood.
  - **Situational:** learned helplessness arises due to the individual's interaction with their environment.
- **Reductionist:** genetic explanation is reductionist as it only considers a narrow set of genes (e.g. those relating to serotonin). It doesn't consider all instances of depression or why not all first degree relatives develop same disorder.
- **Deterministic:** as we can't change our DNA, and individuals that have a family history of depression are automatically at more risk, it makes the genetic cause of depression deterministic. However, as there is only a small genetic variation in females, there could be other non-genetic causes (non-deterministic).
- **BDI:** application to real life as useful for clinicians, but subject to bias and social desirability.

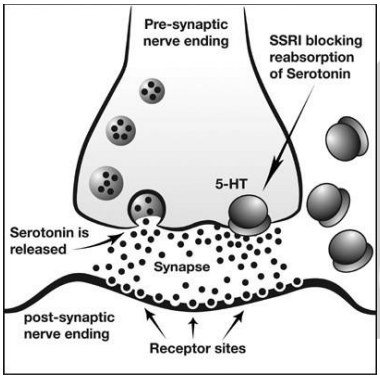
2.3 Treatment and management of depression

2.3.1 Biochemical: MAOIs and SSRIs

- Numerous anti-depressant drugs available which effects neurotransmitter levels in brain.
- **Monoamine Oxidase Inhibitors (MAOIs)**
  - Inhibits work of enzyme known as monoamine oxidase.

- Monoamine oxidase is responsible for breaking down and removing neurotransmitters like norepinephrine, serotonin and dopamine.
- Thus, MAOI prevents monoamine oxidase from breaking these neurotransmitters down, maintaining them at high levels in the synapse for the postsynaptic neurone.
- **Side effects:**
  - Headaches/drowsiness
  - Insomnia
  - Nausea
  - Diarrhoea
  - Constipation
  - Addiction
  - Suicidal thoughts
- Can cause issues with withdrawal and may interact with other medications – thus MAOI is reserved for atypical depression (difficult to treat), when other treatments have been unsuccessful.

- **Selective Serotonin Reuptake Inhibitors (SSRIs).**
  - Acts on neurotransmitter serotonin to stop it from being reabsorbed into pre-synaptic neurone, keeping it at high levels in the synapse for the post synaptic neurone.



  - Fewer and less severe side effects than MAOIs, though depends on patient's response.
- Both MAOIs and SSRIs are more effective than placebos, although impact is more noticeable for patients with moderate to severe symptoms and less with mild depression (Fournier et al., 2010).

2.3.2 Electro-convulsive therapy

- Last resort; if biochemical and CBT is non-responsive.
- Study by Dierckx et al. (2012) included 1000 patients with unipolar or bipolar depression and showed that ECT has similar effectiveness as antidepressants, both resulting in around 50% remission (reduction in severity) rate.
- The benefits of ECT is short term as it is administered in short sessions, in contrast to the maintenance effect created by on-going drug therapy.
- Thus, relapse rates are just as high as those that stop antidepressant use; patient will have a reoccurrence of symptoms, requiring further treatment (Jelovac et al., 2013).

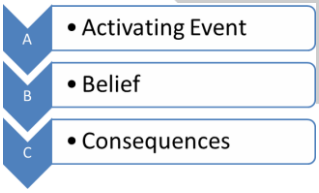
2.3.3 Cognitive restructuring (Beck, 1979)

- Talking therapy; one-to-one interactions between depressed patients and therapist.
- Involves techniques like questioning and identifying illogical thinking to determine and change patients' thinking.
- Begins with explaining theory of depression using cognitive triad so patient knows that their thinking contributes to their depression.
- Further, patients are trained to observe and record their thoughts to help them recognise irrational/inaccurate beliefs.
- Once patients recognise their cognition, they can understand the link between their thoughts, its effect on behaviour and vice versa.
- Patients are trained to record dysfunctional thoughts to identify their occurrence in reality. They are then discussed in therapy, to explore whether they really are an accurate reflection of reality.
- **Purpose of this reality testing:**
  - For patients to realise negative distortions in thinking for themselves.
  - **Reattribution**: a technique which tests automatic thoughts and assumptions by considering alternative causes of events.
  - Therapist can help reattribute thoughts of patients by identifying whether the causes of problems are internal or external to make the patient realise that they were not responsible.
  - The therapy completes when the patient can employ cognitive restructuring for themselves and see a reduction in depressive symptoms.
- **Study by Wiles et al. (2013):** showed that depressive symptoms reduce using CR in those that don't respond to antidepressants.

- A group of 469 depressed patients were randomly allocated to either the on-going medications group or CBT.
- Those who received therapy were 3 times more likely to show a reduction in depressive symptoms.

2.3.4 Rational Emotive Behavioural Therapy (REBT) (Ellis, 1962)

- Based on the principles of Stoicism.
  - Stoicism is a philosophy, based on a theory by Albert Ellis (1962) that an individual is not directly affected by external things but rather by their own perception of how they affect them.
  - According to Ellis, this is how depression should be identified and treated.
- **Process of ABC model of psychological change:**



COMPONENTS	EXAMPLE	DESCRIPTION
A Activating event	-Unsuccessful at a job interview	Adversity in one's life (not directly the cause of emotional upset or negative thinking)
B Beliefs about event	-I'll never get anywhere -I'm just not good enough	Beliefs about the activating event which lead to emotional and behavioural problems
C Consequences: emotional and behavioural responses	-Feeling sad, tearful or angry -Withdrawal from friends and family -Refusal to apply for other work	

- **B is the most important element because:**
  - (According to Ellis) it is how one perceives experiences that has the greatest impact on our emotional wellbeing and behavioural outcomes.
    Irrational beliefs = greater risk of depression.
- Goal is to help individuals create and maintain constructive, rational patterns of thinking.
  - This means identifying and changing thoughts leading to guilt etc, or negative behaviour e.g. avoidance, addiction etc.
- This is achieved via **disputing:** REBT therapist questions irrational beliefs to reformulate dysfunctional beliefs.
- It can help patients to choose how they think and feel about setbacks.
- Individuals must realize that (C) is only partly a result of (A). Then they must accept that holding on to negative and self-defeating beliefs (B) is a destructive tendency but one that can be disputed and replaced with healthy thoughts.
- **Lyons and Woods (1991)**
  - Conducted a meta-analysis of 70 REBT outcome studies.
  - Total of 236 comparisons of REBT to baseline measures, control groups or other psychotherapies are examined.
  - Result was that REBT showed better improvement compared to baseline measures and control groups.
- Another study **(Iftene et al., 2015)** showed that both REBT and antidepressants are equally effective in reducing depressive symptoms.

Evaluation:

- **MAOIS and SSRIs**
  - Well-controlled experiments
  - Large samples hence highly replicable
  - Mild and temporary side effects e.g.: headaches or severe ones such as suicidal thoughts.
- **REBT and cognitive**
  - Use of control groups helps make valid conclusions.
- **ECT**
  - Physical and psychological harm.
  - Memory loss.

Issues and debates:

- **Individual vs Situational**
  - All treatments focus on individual such as imbalance of neurotransmitter levels or irrational thinking. Situational factors e.g.: social isolation is given less focus.
- **Nature vs Nurture**
  - MAOIs, SSRIs and ECT consider biological factors (nature) as most important in reducing symptoms of depression.
  - Cognitive therapy and REBT regard dysfunctional patterns of behaviour and thinking as learned by nurture.

3. IMPULSE CONTROL DISORDERS AND NON-SUBSTANCE ADDICTIVE DISORDER

3.1 Characteristics

3.1.1 Definitions (Griffiths, 2005)

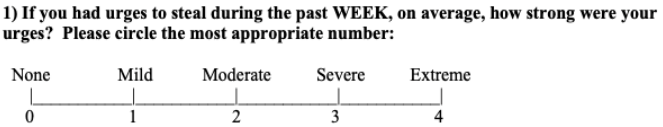
- ICDs are characterised by failure to resist temptation/urge/impulse - individuals find it difficult to regulate thought and behaviour connected to a certain behaviour.
- **According to Griffiths, there are 6 components to any addiction disorder:**
  - **Salience:** the addiction becomes the single most important activity in their life. It dominates their thoughts, feeling and behaviour.
  - **Euphoria:** the addictive behaviour creates mood modification – feelings of being 'high', or escape and peace.
  - **Tolerance:** gradually, the person has to do more of addictive behaviour to get the same effect.
  - **Withdrawal:** unpleasant feeling or physical effects faced when the behaviour is reduced or stopped.
  - **Conflict:** conflict can occur between the person and surrounding. They may compromise their personal relationships, work, education or other social activities.
    - They may face **internal conflict** when they are unable to stop the addiction despite wanting to.
  - **Relapse:** the chances of returning to addictive behaviour despite reduction efforts.

3.1.2 Types

- **Kleptomania:** an impulse control disorder that involves an urge to steal – the items are not needed for personal use or monetary gain.
  - The more difficult the challenge of gaining the objects, the more thrilling and addictive it becomes.
  - It is characterised by intrusive thoughts and urges to steal.
  - More women seem to have the disorder, perhaps because they are more likely to seek treatment.
  - Occurs between 0.3% and 0.6% of the population and they are diagnosed with other disorders such as anxiety and substance misuse.
  - Can lead to arrest, prosecution, embarrassment and loss of employment.
- **Pyromania (Burton et al. 2012):** an impulse control disorder characterised by an impulse to start fires and deliberately doing so on more than one occasion.
  - These individuals are fascinated with fires, its accelerants etc - they feel a sense of satisfaction and arousal once the fire has started.
  - Some pyromaniacs are indifferent to the destructive consequences, however some report feelings of severe distress.
- **Note:** both pyromaniacs and kleptomaniacs may feel tension before the act, then gratification afterwards.
- **Gambling disorder:** a non-substance addictive disorder that is characterised by constant and troubled gambling behaviour, difficulty withdrawing even if big money is lost, lying to conceal involvement with gambling and loss of significant relationships.
  - Gambling is shown to activate the brain's reward system in a way that is similar to substance abuse.

3.1.3 Measures (Kleptomania Symptom Assessment Scale-KSAS)

- 11-item self-rated scale which measures impulses, thoughts, feelings and behaviours related to stealing in the last 7 days.
- Each item is rated on a 0-4 or 0-5 point-based scale (0=no symptoms, 4 or 5= severe, frequent or enduring symptoms)



Evaluation of K-SAS

- High score on **test-retest reliability.**
- Good concurrent validity when compared to other validation tools such as Global Assessment of Functioning Scale.
- Could have **response bias** as it is a self-report.
- Provides **quantitative data** which makes it easy to compare to outcomes of interventions.

Issues and debates

- **Relevant to everyday life** as can be used in monitoring symptoms, to gain insight in patient's thoughts and feelings to develop treatments and help person with disorder to understand their behaviour.

3.2 Explanation

3.2.1 Biochemical: dopamine

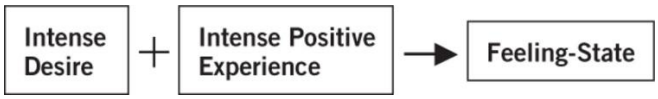
- Rewarding stimuli such as stealing or gambling stimulate reward centres and release dopamine.
- When behaviours become compulsive, you develop tolerance, and levels of dopamine in striatum reduce.
  - Striatum is responsible for the reward and behavioural control.
  - A deficiency of dopamine in the striatum leads to continuation of compulsions and addictions, increasing stealing behaviours.
    - This is known as '**Reward deficiency syndrome' (Comings & Blum, 2000)** and can be used to explain other forms of addiction.
- Kleptomania is a possible side effect of using synthetic dopamine for treatment of disorders such as Parkinson's.
- Evidence shows that symptoms of gambling disorder and compulsive shopping emerge alongside the use of dopamine drugs, proving relationship between dopamine and impulse control disorders.

3.2.2 Behavioural: positive reinforcement

- When you receive a reward for doing a certain activity, you tend to repeat the activity to achieve more reward – this is positive reinforcement; it occurs when learned behaviour is a result of previous trials.
  - E.g the enjoyment gained by winning in poker
- Gamblers don't stop playing once they start losing because of **Schedules of reinforcement.**
  - Gamblers don't win every time they play, and so don't feel a 100% satisfied. Thus, they continue to play over and over, believing that playing just one more time will make up for the loss/lead to victory. This is **partial reinforcement.**

3.3.3 Cognitive: Feeling-State Theory (Miller, 2010)

- Miller believes that the underlying thoughts and feeling states (thoughts, sensations and emotions) a person experiences during an activity creates a state dependent memory, leading to impulse controls disorders.
- Feeling states are created by an intense desire to do an activity, the positive experience associated with it (psycho-physiological arousal) and the memory of the behaviour.



  - E.g. pyromaniac who has feeling state 'I am powerful', combined with positive emotions, physiological arousal and memory of setting the fire leads to compulsions of fire-setting behaviour.
- Underlying negative thought or experience is the most likely cause of the feeling-states that leads to impulse control disorders.
  - E.g. the pyromaniac who has the feeling-state 'I am powerful' when setting a fire may have underlying set of negative beliefs (e.g. I'm weak), making the act more intense and desirable.
- Further negative beliefs occur when behaviour becomes out of control as gambling, stealing etc have negative consequences for the individual and those around.
- **Note:** normal behaviours in moderation only become problematic because of fixated, intense feeling-states.

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'

Issues and debates

- **Application to everyday life** to treat addictive behaviours; understating role of dopamine has led to biochemical treatments.
- **Individual versus situational debate**
  - **Biochemical explanation** relates to individual impairment of brain function.
  - **Cognitive explanation** is more balanced: naturally, experiences will be stimulating/rewarding/upsetting, but as individuals, we develop our own feeling-states in relation to the experiences, leading to overall change in patterns of behaviour.
- **Nature versus nurture debate:**
  - Behaviourist approach of positive reinforcement (Skinner, 1938) are based on nurture factors. The satisfaction gained from compulsive behaviours (in the environment) reinforces subsequent behaviour.

- Biological approach (effect of dopamine uptake) is based on nature factors.

3.3 Treatment and management

3.3.1 Biochemical (Grant et al., 2008)

- Research suggests that drugs like opiates (painkillers) can be successful to treat gambling disorder.
- **Sample:**
  - 284 participants (roughly equal split of both genders) participated in a **double-blind experiment**.
  - They were divided to take either the 16-week course of opiate nalmefene or the 18-week course of naltrexone, a placebo.
- **Measures:** Yale Brown Obsessive Compulsive (Y-BOCS) scale to measure gambling severity.
- **Aim:** whether taking opiates would reduce gambling behaviour, which was operationalised as a ≥35% reduction in their **Y-BOCS** scores for at least one month after study.
  - **Note:** participants' depression, anxiety and psychosocial functioning were considered in their response to treatment.
- **Results:**
  - Opiate group had significant reduction in gambling symptoms.
  - Also, significant individual differences contributed to greater reduction in Y-BOCS scores.
    - Participants with family history of alcoholism and those who received higher dose of opiates showed greater reduction in symptoms. This suggests its more effective in some addicts than others.

3.3.2 Cognitive-behavioural

Changing distortions in thoughts and feelings to enact behavioural changes.

Covert sensitisation (Glover, 2011)

- Uses classical conditioning by combining an undesirable behavior with an unpleasant stimulus to change the behavior
- **Background of Kleptomaniac study:**
  - A 56-year-old woman had a 14-year history of daily shoplifting without any purposeful gain e.g stealing baby shoes despite not having anyone to give them to.
  - Several compulsive thoughts occurred to her which were disgusting but hard to resist.
- **Procedure of treatment:** imagery of nausea and vomiting during the act of stealing.
  - The woman underwent 4 sessions at 2-week intervals.
  - For first 2 weeks, **muscle relaxation** was used to enhance her ability to visualise.
    - **Muscle relaxation-** used to relieve tension from within the body and mind. Can be induced through medication, visualisation exercises or repetition of calming phrases. Progressive muscle relaxation is achieved through systematically tensing and relaxing the muscles of the body in turn.
  - Increasing nausea visualisation was used over each session; she imagined vomiting as she stole which attracted attention and disgust from those around her.
  - She practiced these visualisation exercises as homework after each session.
  - During the last session, she imagined the sickness going away as she walked away without shoplifting.
  - At the 19-month check-up, she had decreased desire and avoidance of stealing, with 1 relapse, along with improvements in self-esteem and social life.

Imaginal desensitisation (Blaszczynski & Nower, 2003)

- Relies on the use of images to help individuals with impulse control disorders.
- First, a progressive muscle relaxation technique is taught.
- Then, clients visualise themselves in a triggering situation (e.g gambling venue) and are asked to think about acting on their impulse and all the psycho-physiological arousals associated with it.
- Finally, they have to mentally leave the situation while maintaining state of relaxation and not having acted upon the impulse.
- The sessions are often audio-recorded to assist practicing outside therapy.
- Found to be effective as it reduces the strength of a compulsive drive. This is done by reducing levels of psycho-physiological arousal associated by these disorders.
- In gambling, it was found to decrease arousal and anxiety levels associated with gambling impulses even at a 5-year follow-up.

Impulse control therapy (Miller, 2010)

- Doesn't aim to eliminate behaviour but to establish normal behaviour e.g.: compulsive shopper can still shop, but without triggering problematic behaviours i.e. overspending, hoarding etc.

- It involves changing distorted thoughts about their behaviour, linked to feeling-state explanation.
- First, the aspect of behaviour that produces most intense feeling, the intense positive feelings itself, and the physical sensations are all identified.
  - Measured on a standardised scale known as the **'Positive Feelings Scale'** for comparisons.
- The client is then asked to combine images of the compulsive act, positive feelings and physical sensations (recreating the feeling state in their mind) while performing **eye movement desensitisation and reprocessing (EDMR) exercises.**
  - **EDMR-** individual recalls behaviour or memories while the therapist directs eye movement patterns using hands or other stimuli.
- In between sessions clients re-evaluate their impulsive feelings using the feeling scale.
- Usually around 3 to 5 sessions are conducted, alternating between visualisation and eye movements until compulsive behaviour is reduced.
- **Case study of John, a compulsive gambler:**
  - After losing first marriage, he got depressed because of the debt that was caused by gambling.
  - With the help of his therapist, he identified his feeling-state memory to be "winning" which was connected to his compulsive behaviour.
  - After visualisation and EDMR, he noticed a reduction in the urge to gamble as his behaviour and feeling changed over the course of 4 sessions.
  - During his follow-up interview, he stated that he is healthy now.

Evaluation

- **Biochemical:**
  - Grant used **double-blind trial** so no researcher bias, **increasing validity.**
  - Data collected was **quantitative**; using **objective** data in the **standardised** Y-BOCS tool.
  - **Ethical issues** as placebos would deceive participants.
- **Cognitive-behavioural:**
  - Glover shows that covert sensitisation can be used effectively to reduce symptoms of kleptomania, but it used a case study specifically for kleptomaniacs, which won't be **generalisable** to other impulse control disorders.
  - The same goes for Miller who also uses case study of John.
  - In both cases, the follow-up treatments occurred within a year post-treatment, which could check for relapse.
  - However, the therapist is assessing the participants, which would make it **biased**
- In-depth **qualitative** data obtained via case studies.

Issues and debates

- **Applied to real life:**
  - Study by Grant et al. showed effectiveness of opiates in treating gambling disorder; also shows in what circumstance opiate will be most effectiveness.
  - Cognitive-behavioural treatments can be used alongside drug therapy or to improve the symptoms of those with treatment-resistant impulse control disorders.
- **Reductionist:** management of disorders are fairly reductionist e.g.: use of opiate showed effectiveness. However, it ignores the circumstances in a person's life like the problem that triggered the disorder.
- **Individual vs situational:** cognitive and behavioural approaches to treatment like covert sensitisation don't focus on the person's social and emotional situation- they rely on an individualistic approach.

4. ANXIETY DISORDERS

4.1 Characteristics

- Anxiety is classified as a pattern of frequent, persistent worry and apprehension about a perceived threat in the environment.
- It is minor or non-existent but the person perceives it as highly threatening.
- Phobia is an extreme and irrational fear towards a stimulus and is disproportionate to the actual danger.
- **Common symptoms of Anxiety:**
  - Muscle tension
  - Restlessness
  - Feeling constantly 'on edge'
  - Difficultly concentrating (due to being preoccupied with their worry)
  - Tiredness and irritation (due to sleep disturbance).
- **Generalised Anxiety Disorder (GAD):** a long-term condition wherein feelings of anxiety may be generalised over multiple situations and things (money, health, family, work etc), rather than a specific stimulus (phobia).

- Panic attacks are a common feature and can last minutes or hours. **It's symptoms are:**
  - Fear of dying or losing control
  - Sensation of shortness of breath or choking
  - Nausea
  - Feeling dizzy or light-headed
  - Sweating
  - Accelerated heart rate

4.1.2 Case study: Kimya (female aged 39)

- Kimya is afraid of birds, not knowing what caused her extreme anxiety.
- She can't even look at photographs of birds; the thought of looking or touching birds makes her sick
- She finds the sounds of wings flapping rather upsetting.
- She avoids places where she might be exposed to birds: beaches, town centres, or woodlands, limiting her social life.

4.1.3 Types and examples

- **Agoraphobia-** fear of public places.
  - **Characterised by a fear of two or more of:**
    - standing in line or in a crowd
    - being in open spaces
    - using public transport
    - being outside the home by oneself
    - being in enclosed spaces
  - Agoraphobic individuals will actively avoid such situations, or experience severe distress while enduring them. Depending on the nature of the phobic stimulus, the anxiety can cause significant impairment to social and working life.
- **Haemophobia**: an irrational fear of blood but can also extend to needles, injections or other invasive medical procedures.
  - Individuals experience an increased heart rate; combined with a drop in blood pressure, they can end up fainting.
- **Animal phobias**: commonly include dog, insect, bird and spider phobias.
  - Individuals feel distress and panic attacks when faced with them.
- **Koumpounophobia:** fear of buttons.
  - Individuals can't touch or look at them.

4.1.4 Measures (BIPI, GAD-7)

- **The Blood-Injury Phobia Inventory (BIPI)** measures haemophilia.
  - Self-report measure that lists 18 situations involving blood and injections to find cognitive physiological and behavioural responses.
  - **Example situation:** when I see someone injured bleeding on the road
  - **Example response:**
    - **Cognitive:** I think I'm going to faint
    - **Physiological:** my heartbeat speeds up
    - **Behavioural:** I escape from the situation immediately.
  - Asked to rate on a scale of 0-3 the frequency of each symptom (0=never, 1=sometimes, 2=almost always, 3=always).
- **Generalised Anxiety Disorder 7 (GAD-7)** questionnaire is a screening test often used by general practitioners to enable further referral to a psychiatrist.
  - Has 7 items which measure the severity of anxiety.
  - **Example items**:
    - Feeling nervous, anxious or on edge
    - Being so restless that it is hard to sit still
    - Feeling afraid as if something awful might happen
  - Score between 0-3 to measure frequency of symptoms (0=not at all, 1=several days, 2=more than half the days, 3=nearly every day).

Evaluation of GAD-7 and BIPI:

- High **concurrent validity** with other measures thus **valid** and **reliable** instruments.
- **Response bias:** inaccurate response can distort results e.g. the person had a 'bad' day (had a finger cut)

Issues and debates

- **Reductionist**: these psychometric tests rely on a single quantitative measurement of what is a rather complex experience for patients. They do not take qualitative data into account e.g. what it is like having a phobia.
- **Cultural bias:** cross cultural differences influence BIPI and GAD-7 results e.g. cultures that promote well-being and give reassurance to those around will have low diagnostic rates of social phobia.

4.2 Explanations

4.2.1 Behavioural (classical conditioning, Watson, 1920)

- Phobia may be a result of a classical conditioning where when a neutral stimulus is paired with a frightening stimulus, future association with the neutral stimulus will produce a fearful conditioned response.
- Watson and Rayner wanted to check whether fear could be learned via classical conditioning and whether it could be transferable to other objects and individuals.
- They used the principles of classical conditioning to create a phobia in a young and healthy 11-year-old boy, 'Little Albert'.
- Prior to conditioning, he was shown a range of stimuli: white rat, rabbit, dog, monkey, masks, cotton wool, etc, to which he reacted neutrally.
- The table below proves that fear can be learned through classical conditioning.

BEFORE CONDITIONING	UNCONDITIONED STIMULUS (UCS)	UNCONDITIONED RESPONSE (UCR)
	Loud noise of metal bar	Fearful crying and avoidance
During conditioning	**Neutral stimulus + unconditioned stimulus** (NS) + (UCS) White rat + loud noise	**Unconditioned response (UCR)** Fearful crying and avoidance
After conditioning	**Conditioned stimulus (CS)** White rat or similar animal/item	**Conditioned response (CR)** Fearful crying and avoidance

4.2.2 Psychoanalytic (Freud, 1909)

- Freud suggested that phobias are defence mechanisms against anxiety created by any unresolved conflict between the id and the ego, usually when the id is denied.
  - **Id:** based on the pleasure principal and seeks immediate gratification. It is the instinctive/impulsive behaviour.
  - **Superego:** based on morality principle; pushes towards socially acceptable behaviour
  - **Ego:** based on reality principle; finds middle ground between id and superego; allows rational delayed gratification
- The ego uses displacement to rechannel anxiety to another 'thing' that symbolises the phobic stimulus so that they become fearful of that instead.
- In the classic case, little Hans had a fear of horses, displaced from a fear of his father, which was a coping mechanism.
- **About Hans (case study):**
  - A 5-year-old Australian boy
  - Developed a fear of white horses (thinking they would bite him) at the age of 4
  - Had **Oedipus complex:** term used by Freud in his theory of psychosexual stages of development to describe a child's feelings of desire for his/her opposite-sex parent, developing jealousy and anger toward his/her same-sex parent.
  - At the same time as he developed a phobia of horses, a conflict emerged between Hans and his father who banished him from their bedroom as he would cuddle with his mother. This also produced a conflict between Hans' id and ego.
  - At the age of 3, Hans' mother threatened to castrate him as he continuously played with himself, resulting in his fear of castration.
- **His father reported two of his fantasies:**
  - He had several children with his mother while his father was his grandfather.
  - A plumber came and replaced his penis with a new, larger one.

Findings

- Anxiety experienced was related to his fear of castration and banishment.
- Freud felt that the horse represented Hans' father (the black noseband symbolised his moustached father).
- This shows that Hans had developed a phobia of his father as he feared his father would discover his fantasies but displaced the fear onto horses to generate a coping mechanism.
- The Oedipus complex originated from Hans' fantasies, which represented the three-way relationship between Hans and his parents.
- Hans' fantasies were also a coping mechanism to reduce Hans' phobia.

4.2.3 Biomedical/genetic (Ost, 1992)

- This explanation suggests that there's dangerous stimuli that we are genetically set to avoid which develop into phobias and are transmitted in our DNA for survival.
- **Sample:** 81 blood phobic, 59 injection phobic patients; they were compared with another sample of participants with different specific phobias (animal, dental and claustrophobia)
- **Procedure:** participants underwent a screening interview and completed a self-report questionnaire on the history and nature of their phobia.
  - **Behavioural test:** blood phobics were shown a 30 min silent colour video of surgery. They were told to watch for as long as they could; if the participant looked away or stopped the video, the test would be terminated.
  - **Injection phobic test:** a live test involving 20 steps wherein each step was described to participants. They would proceed only with participants' approval, otherwise the test would terminate. Steps include cleaning a fingertip to performing a fingertip prick.
- **Three measures:**
  - Percentage of maximal performance (eg how long they watched video)
  - Experimenter's rating on patient's behaviour (0= no fainting, 4=fainting)
  - Self-rating of anxiety (0= not at all anxious, 10= extremely anxious)
- Participants also completed a questionnaire about their thoughts throughout the test
- Heart rate and blood pressure was monitored throughout, as fainting is associated with changes in these.
- **Findings:**
  - Family history showed that 50% of blood phobics and 27% of injection phobics had one or more parents with the same fear
  - Around 21% of blood phobics also reported having at least one sibling who shared the disorder
  - **History of fainting:** high proportion of blood (70%) and injection (56%) phobics had a history of fainting when exposed to their phobia
  - These results are higher than participants with other phobias
- **Conclusion:** strong genetic link for these phobias, producing a strong physiological response (fainting).

4.2.4 Cognitive (DiNardo et al., 1988)

- Phobics perceive ambiguous stimuli as more threatening than others. They may also be pessimistic and believe that they would not be able to cope with being exposed to the phobic stimuli.
- **Di Nardo et al** conducted a study to investigate the origin of **cynophobia** (fear of dogs).
  - 14 cynophobics and 21 non-fearful female college students were structurally interviewed to obtain information on the origin of the phobia.
  - They wante d to know whether unpleasant events (conditioning events) involving dogs were more common in cynophobics or non-cynophobics. They also wanted to compare the expectation of physical harm/fear upon encountering a dog.
  - A group of 37 female psychology students aged 18-21 were chosen from a larger student population. Fearful and non-fearful participants were obtained from the sample using a live behavioural test.
  - In the interviews, they were asked about past negative encounters with dogs, their expectations of harm from such encounters and an estimate of the likelihood of these expectations.
- **Results:**
  - Conditioning events involving dogs, such as bites or scratches, were reported by both fearful (56%) and non-fearful (66%) groups.
  - However, the anticipation of harm occurring was far greater in the fearful group than non-fearful.
- **Conclusion:** factors other than conditioning events such as individual's perception and rationalisation of events determines whether conditioning events will develop into phobias.

Evaluation

- **Behavioural and psychoanalytic studies**
  - They were both **case studies**, thus the acquisition of phobias from Little Albert or Hans' experiences can't be generalised.
- **Watson and Rayner's study**
  - Had lots of **controls** with several trials involving different stimuli to check whether Albert was a fearful boy. As Albert was healthy and confident, it is possible that phobias may be **acquired** by other children similarly.
- **Freud's study**
  - Lacked **objectivity** as he was a friend of Hans' father, who also provided him with the case study detail.

- The research lacks **validity** as it may be biased towards proving Freud's existing theories about the subconscious and psychosexual stages.

- **Biomedical and cognitive explanations**
  - Objective as they both had higher levels of **control**, **standardised** behavioural tests and interviews with larger groups of participants, thus **generalisable.**
  - Both studies were **cross-sectional** thus didn't consider participant's experiences in depth.
    - **Cross sectional study:** observational study that analyses data from a population at a specific point in time.
- **Applicable to real life:** in understanding how phobias are acquired, right methods of treatments can be used.

Issues and debates

- **Nature:** biological explanation relies on genetic factors on prevalence of phobia
- **Nurture:** behavioural explanation relies on conditioning events that are product of the environment. Little Albert was born healthy, happy, and confident, but conditioned by his experience to fear rats.

- **Use of children as participants and ethical issues:** both Watson and Rayner and Freud used children in their studies, however back then, ethical issues were not a significant concern. Little Albert went through a traumatic experience when conditioned to fear rats, and there's questions around Hans' consent in the study.
- **Determinism vs free will**
  - **Behaviourist explanation** is deterministic as a conditioning event will produce a conditioned response of fear.
  - **Cognitive explanation** counters this by proving that both fearful and non-fearful groups had conditioning events, so other complex explanations may be the cause of our behaviour e.g. each individual's thought process
  - **Reductionism:** both biological (genetic link) and behavioural explanations (classical conditioning) are reductionist.
    - Cognitive explanation is less reductionist as it accepts conditioning as one of the explanations, but not the only explanation.
  - **Holism:** Freud considers the experiences, thinking and environment of the individual by his **longitudinal** case study of Hans. He takes account of his fears, dreams, conversations, fantasies over years to trace the origin and resolution of his horse phobia.

4.3 Treatment and management of anxiety disorders

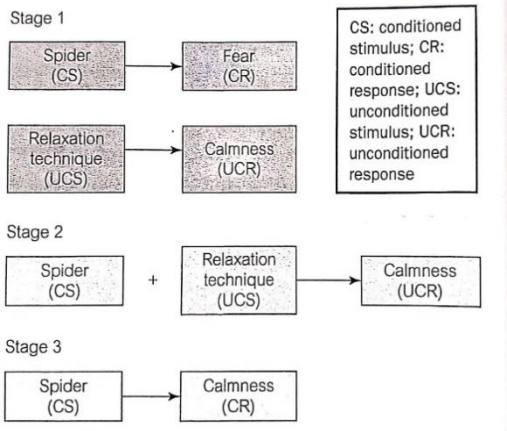
4.3.1 Systematic desensitisation (Wolpe, 1958)

- It is a way of reducing undesirable responses to a particular situation.
- It holds the assumption that nearly all behaviour is a conditional response to stimuli in the environment.
- If a phobia can be learned, it can be unlearned.
- Systematically desensitising a patient requires that a once frightening stimulus should eventually become neutral and provoke no anxiety.
- **Reciprocal inhibition:** the impossibility of feeling two strong and opposing emotions simultaneously.
- Key to unlearning phobic reactions through SD is to put the fearful feelings associated with phobic stimulus directly in conflict with feelings of deep relaxation.
- **Stages in SD:**
  - **Teach patient relaxation techniques:** progressive muscle relaxation exercises, visualisation or even anti-anxiety drugs.
  - **Creating an anxiety hierarchy:** a list of anxiety provoking situations in relation to specific phobia that increases in severity.
    - Patient works through each stage of the hierarchy via in vivo (direct) or in vitro (imagined) exposures.

Stage	Situation relating spider phobia
1	Looking at a drawing of a spider
2	Looking at a detailed photo of a spider
3	Watching a spider making a web on a video
4	Being in the same room as a spider
5	Standing in front of a spider's cage
6	Standing next to another person holding a spider
7	Touching spider whilst someone else holds it
8	Holding spider in their own hand

  - At each stage of the hierarchy, patient is assisted to remain calm and relaxed using their chosen technique. The patient does not proceed to next stage until they report no feeling of anxiety in current stage.

Principles of classical conditioning linked to SD



- As both feelings of fear and calm are incompatible, fearful response to stimulus is unlearned and no more anxiety produced.
- Good evidence supports the effectiveness of SD in agoraphobia and fear of snakes, however treatments involving more direct forms of exposure are now more commonly used.

4.3.2 Applied tension (Ost et al., 1989)

- Involves applying tension to muscles to increase blood pressure throughout certain areas.
- **E.g.** blood phobia is associated with drops in blood pressure and consequently fainting. Using increased muscle tension, blood pressure can be raised and fainting prevented.

In a study by Ost et al:

- **Sample:**
  - 30 patients (19M:11F) from same hospital with phobia of blood, wounds and injuries
  - 18-60 years
  - Using an independent design, they were divided into 3 groups: applied tension, applied relaxation or a combination
- **Aim:** establish which treatment was the most effective, including applied tension.
- **Procedure:** participants were part of either group below and underwent the following 45-60 min sessions:
  - **Applied tension group:** 5 sessions
    - Participants learnt to tense their arm, chest and leg muscles until they experience a feeling of warmth rising to their face. Once mastered, they would practice it during exposure to several situations involving blood.
  - **Applied relaxation group:** 9 sessions.
    - Applied relaxation technique involved progressive muscle relaxation during exposure to same stimuli.
  - **Combined group:** 10 sessions.
  - **Prior to treatment**:
    - Participants were assessed by self-report, along with behavioural and physiological measures to establish tendencies towards anxiety and fainting.
    - This included being observed whilst watching videos involving surgical operations and having their heart rate and blood pressure measured.
- **Results:** after treatment and 6 months post treatment, participants were given the same set of measures to establish any changes
  - **Across all groups:** 73% of participants showed a noticeable improvement in behavioural and physiological responses to blood.
  - **Applied tension:** was as effective as other forms of treatment in **half the time**, it was therefore the most appropriate treatment for haemophobia.

4.3.3 Cognitive-behavioural therapy (Ost and Westling, 1995)

- CBT considers the need to change individual's thoughts and beliefs about the source of their anxiety.

In the study by Ost and Westling:

- **Aim:** compare effectiveness of CBT with applied relaxation (AR) in patients with panic disorder (characterised by spontaneous/unexpected panic attacks)
- **Sample**:
  - 38 patients were recruited via newspaper advertisement and psychiatrist referrals.
  - They were treated individually across 12 weekly sessions.
  - They were assessed before, after and in a one-year follow-up by a self-report scale and self-observations of panic attacks which included noting panic attacks and their severity in a diary.
- **Procedure:**
  - **Steps in CBT:**

    1) Identifying the misinterpretation of bodily sensations i.e. thinking that when heart beats fast, they are having a heart attack

    2) Participants were encouraged to generate alternative, non-catastrophic interpretations of their bodily sensations.

    3) The therapist challenged the patient's evidence for their beliefs.

- **Steps in AR:** progressive muscle relaxation techniques were taught, which were then practiced in both panic and non-panic situations.

- **Results:** no significant difference nor relapse between AR and CBT, suggesting both methods were successful in short to medium term alleviation of panic attack symptoms.

Evaluation

- **Study by Ost et al (1989):**
  - Sample was from same hospital, limiting **generalisability**
  - Both sexes were part of sample, so results could be applied to both
  - An **independent measures design** was used; thus, **participant variables** could have affected the outcome, reducing validity
  - **Ethical issue:** although consent was given, participants were exposed to surgical procedures, which caused **distress**
- **Study by Ost and Westling (1995):**
  - **More ethical** as participants kept diaries of naturally occurring panic attacks, instead of triggering it
  - Well controlled as therapists were given standardised training, increasing validity and removing **extraneous variables**
  - One year follow up shows long term effect of treatment rather than a 6 month follow up in **Ost et al (1989)**

OBSESSIONS	COMPULSIONS

• **Fear of:**
  ○ Deliberately harming oneself
  ○ Illness/infection
  ○ Harming/killing others
  ○ Accidentally injuring oneself/others
• Strong desire for order and symmetry
	• Frequent and excessive hand-washing
	• Putting things in order
	• Repetitive checking
	• Repeating words to oneself/repetitive counting.

Issues and debates

- Treatments are **applicable to real life** and the most effective treatment is found e.g. applied tension was more effective for haemophobics than AR, reducing waiting times for therapy
- **Nature vs nurture**
  - In the case of SD, behaviourists assume that individuals are born (nature) a 'blank state' with few specific behaviour tendencies and further behaviours such as phobia are developed via classical conditioning (nurture)
  - However, not all phobias develop from negative associations of traumatic events. Some are believed to have served an evolutionary purpose (nurture).
  - Thus, systematic desensitisation and other behavioural treatments are most effective for phobias that are learned.

5. OBSESSIVE COMPULSIVE AND RELATED DISORDERS

5.1 Characteristics

- **Obsessions:** intrusive, recurrent **thoughts** and unwanted urges.
- **Compulsions:** repetitive **actions** that impair normal functioning.
- Patients with OCD will often be compelled to supress obsessions to reduce anxiety and gain temporary relief. However, these compulsions are excessive and unrealistic – e.g., a person having a fearful obsession of accidentally hitting someone may be compelled to engage in continuous counting.

- **Hoarding:** experiencing great difficulty and distress getting rid of possessions negatively affecting their social life. Their homes may be unsafe due to hygiene or access issues.
- **Body dysmorphic disorder (BDD):** obsessive thoughts regarding perceived faults in one's physical appearance.
  - These faults are slight or not obvious to others.
  - The obsessions are often focused on imagined flaws/defects on the face.
  - The anxiety caused by obsession leads to compulsive, repetitive behaviour e.g. frequent mirror-checking, excessive grooming (hair-washing, shaving etc) and comparing one's self to others.

5.1.2 Case studies: ('Charles' by Rappaport, 1989)

- 14-year-old boy with OCD who spent >3 hours showering, and 2 hours getting dressed.
- He had repetitive routines for holding soap in one hand, putting it under water, switching hands and so on.
- His mother contacted Rappaport after the chid exhibited this behaviour for around 2 years.

- He was utterly obsessed with the thought that he had something sticky on his skin that had to be washed off causing him to leave school.
- He had also had trips to the hospital, where he received standard treatments of medication, behavioural therapy and psychotherapy.
- He was socially isolated as his rituals left him little time outside the house.
- He underwent a drug trial for clomipramine (antidepressant) giving him effective relief of his symptoms; however, he developed tolerance to it and relapsed.

5.1.3 Measures: Maudsley Obsessive-Compulsive Inventory (MOCI), Yale-Brown Obsessive-Compulsive Scale (Y-BOCS)

- **MOCI:** quick assessment tool (takes around 5 mins to complete) and is scored between 0-30.
  - Consists of 30 items that are scored either 'true' or 'false', which assesses symptoms related to checking, washing, slowness and doubting e.g.
    - I frequently have to check things (Checking).
    - I am excessively concerned about germs and diseases (Washing)
    - I don't take a long time to dress (Slowness)
    - Despite doing something carefully, I often feel it is not quite right (Doubting)
- **Y-BOCS (Goodman et al., 1989):** consists of a 30-min semi-structured interview and a checklist of different obsessions and compulsions.
  - Checklist includes a 10-item severity scale allowing individuals to rate (between 0-4) time spent on obsessions and compulsions, how hard they resist, and how much distress they cause.
  - Total scores range from 0-40, where >16 is in the range for OCD.

OBSESSIONS	Aggressive, Contamination, Sexual, Hoarding, Religious, Symmetry, Body focus, Other
COMPULSIONS	Cleaning, Washing, Checking, Repeating, Counting, Ordering/arranging, Hoarding, Other

- **Evaluation of MOCI and Y-BOCS:**
  - **High concurrent validity:** individuals will score similarly on different tests for OCD.
  - **High test-retest reliability:** individuals who repeat the measures at different times are likely to get the same results.
  - **Response bias:** self-report measures are **subjective** and patients may downplay the severity of their symptoms, reducing validity.
- **Issues and debates:**
  - **Reductionist:** symptoms of OCD can be very specific and unique to individuals; therefore, it is difficult to design generic tests. Y-BOCS and MOCI tend to be very lengthy and have specific symptoms to diagnose OCD, making it reductionist.
    - They are also 'one dimensional' – rating situations merely as 'not at all distressing' up to 'severely distressing' without considering the complex impact/qualitative data OCD may have.
    - The term 'distress' and can be used to indicate depression, anxiety and functional impairment, not just OCD.
  - **Applications to everyday life:** case study (Rapoport) is useful in understanding OCD and its impact on normal functioning.

5.2 Explanations of OCD

5.2.1 Biomedical (genetic, biochemical, neurological)

- **Genetic:** suggests that patients with OCD inherit specific genes that cause OCD.
  - A large-scale study by Mattheisen et al., 2015 involving 1406 people both with and without OCD were analysed.
  - 2 genes (PTPRD and SLITRK3) interact to regulate particular synapses in the brain (the irregularity of these synapses lead to neurological disorders like OCD)
  - DRD4 (dopamine receptor D4) is related to uptake of dopamine (its abnormal levels are implicated in OCD e.g. high levels of dopamine associated with compulsive behaviour)
  - SERT (onin transporter) gene can cause low levels of serotonin which is associated with OCD (and depression).
  - **Biochemical:** 'oxytocin' or love hormone, is known to enhance trust and attachment, but can also increase distrust and fear of certain stimuli, especially those that pose a threat to survival.

- By analysing cerebral spinal fluid and patient behaviour, Leckman et. al, 1994 found that oxytocin levels are higher in patients with OCD and found a positive correlation with a higher frequency of repetitive behaviour.
- OCD behaviours could be at the extreme end of a normal range of behaviours moderated by oxytocin.

- **Neurological:** abnormalities in brain structure and function.
  - The basal ganglia and two associated regions (orbitofrontal cortex and cingulate gyrus) work together to send and check warning messages about threatening stimuli.
  - In brain-damaged (case study) patients, the checking 'loop' doesn't work as it should, so the basal ganglia continues receiving worrying messages, relating to the obsessive thinking symptom of OCD.
  - **Note:** heightened activity in the orbitofrontal cortex increases conversion of sensory information into thoughts (obsessions) and actions (behaviours), leading to compulsions. PET scans have found higher activity in the orbitofrontal cortex in patients with OCD.

5.2.2 Cognitive and behavioural

- OCD consists of cognitive obsessions and behavioural compulsions.
- Obsessive thinking is based on faulty reasoning e.g. belief that hands covered in germs could kill.
- Compulsive behaviours are outcomes of erroneous thinking, attempts to alleviate obsessions and the associated anxiety.
- Such behaviours are learnt can be explained via **operant conditioning**:
  - Hand washing is the **negative reinforcement** as it has relieved something unpleasant (obsessive thoughts)
  - It is also a **positive reinforcement** as the person is rewarded by knowing they have cleaner hands.

5.2.3 Psychodynamic

- Freud emphasises the unconscious beliefs and desires to explain OCD, and how childhood experiences shape personality.
- OCD symptoms result as an internal conflict between the id and the ego.
- Freud suggests that conflicts arise in the **anal stage of psychosexual development**, around the time most children begin toilet training.
- There's a tension between parents and children, as the parent may want to control when the child defecates/urinates against the child's wishes.
- Child may soil themselves to regain control, upsetting their parents (leads to anally expulsive behaviour: being messy and careless)
- Alternatively, they may fear harsh responses from parents and retain faeces/urine to regain control (leads to anally retentive behaviour: compulsive need for order and tidiness)
- Anally retentive/expulsive behaviours can lead to behavioural disturbances as the individual has become 'fixated' in this stage.
  - **Fixation:** when conflict at psychosexual stage remains unresolved and the person is unable to move onto the next stage.
- Obsessive thoughts coming from id disturb the rational part of self, ego, to the extent that it leads to compulsive cleaning and tidying rituals later in life, to deal with childhood trauma.
- **Evaluation:**
  - **Genetic**: objective and usually controlled under lab conditions, making it highly replicable.
    - However, it doesn't explain why some individuals may carry genes that are implicated in OCD but never develop symptoms.
  - **Biochemical:** oxytocin hypothesis is supported by lab-based studies; however, it is difficult to establish a causal relationship between hormone and OCD symptoms.
  - **Neurological:** supported by case studies on brain damaged individuals, but this lacks generalisability to other OCD patients.
  - **Psychodynamic:** not supported by research as you can't mention or control variables involved, so no causal relationship found e.g. between harsh toilet training and later compulsive washing**.**
- **Issues and debates:**
  - **Biomedical explanations** are potential areas for research into treatment and management of OCD.
  - **Individual explanation:** biomedical, cognitive and behavioural explanations focus on the individual e.g. hormonal abnormalities and faulty thought processes, making it **reductionist.**

- **Situational explanation:** psychodynamic explanation emphasises the effect of early social relationship on an individual's development.
- **Nature:** biomedical explanation (genes, hormones, brain structure)
- **Nurture:** behavioural (learnt behaviours)
- **Both nature and nurture:** psychodynamic (natural urges we are born with vs childhood experiences)
- **Deterministic:** no free will to influence genetic makeup or automatic learning process leading to OCD.

5.3 Treatment and management of OCD

5.3.1 Biomedical (SSRIs)

- SSRI acts on serotonin transporter, increasing its level and acting as a treatment.
- Soomro et al (2008) reviewed the results of 17 studies comparing effectiveness of SSRIs with placebo.
- In all studies, totalling 3097 participants, SSRIs group was more effective at reducing OCD symptoms shown using Y-BOCS 6-13 weeks after treatment.
- SSRIs reduce severity of OCD as they seem to lessen the anxiety associated with it.

5.3.2 Psychological therapies: cognitive (Lovell et al., 2006) and exposure and response prevention (Lehmkuhl et al., 2008)

- **Cognitive:**
  - **Aim:** to compare effectiveness of CBT delivered by telephone vs same therapy offered face-to-face.
  - **Sample:** 72 patients from 2 different hospitals
  - **Procedure:** Lovell et al used RCT wherein participants underwent 10 weekly sessions of therapy either by telephone or face-to-face.
  - Changes in well-being were measured via Y-BOCS, BDI, and a client satisfaction questionnaire.
  - **Result:** 6 months after treatment, Y-BOCS scores significantly improved in both groups, along with high participant satisfaction, suggesting patients may benefit equally from both forms of CBT.
- **Exposure and response prevention (ERP):** Lehmkuhl researched the application of this form of CBT with a 12-year-old boy Jason who had both OCD and autism spectrum disorder (ASD).
  - Jason experienced contamination fear, excessive hand-washing, counting and checking.
  - He spent several hours daily in compulsive behaviour, having anxiety when prevented from his rituals.
  - ERP consists of gathering information about existing symptoms, therapist-initiated ERP and generalisation and relapse training.
  - **Procedure:** Jason attended ten 50-minute CBT sessions over 16 weeks and ERP techniques were modified to fit Jason's needs.
  - **Identification and coping:** Jason first identified feelings of distress and with the help of the therapist, learned coping statements when he felt anxious.
    - Some ERP techniques were modified to fit Jason's needs; he was not asked to do visualisation exercises as he would find it impossible to imagine pretend situations.
  - **Exposure:** he was exposed to stimuli which he felt were contaminated and produced feelings of anxiety/disgust (door handles, elevator buttons)
    - He was asked to touch them repeatedly until he became habituated and his anxiety levels dropped.
    - Mid-sessions, he was exposed to specific tasks in his normal environment – handing out papers in classes or using 'contaminated' items at home.
  - **Results:** Jason's score on Y-BOCS dropped from severely high pre-therapy score of 18 to just 3 (normal).
    - At a 3 month follow up, his score remained low, and he showed improvement in both OCD symptoms and participation in social activities.
- **Evaluation:**
  - **Cognitive therapy (Lovell et al):** used independent measures design where participants were randomly allocated to two conditions, removing researcher bias.
  - Face-to-face CBT group acted as control group, so researchers could compare the results and effectiveness of ERP to the control group.
    - **Validity and reliability:** duration of therapy in both groups was the same, and outcomes were measured using the same validated scales.
    - **Limited generalisability**: case study was used and participant had ASD too, thus unrepresentative of the general OCD population.
    - **Ethical issues:** Jason was a child with additional needs, and issues regarding briefing, consent and risk of psychological harm.

- **Qualitative and quantitative:** in-depth qualitative data through ERP and interviews, along with quantitative data via Y-BOCS scores.

- **Issues and debates:**
  - **Use of children in psychology:**
    - **SSRIs** are generally considered safe, but sometimes restricted in case of children with OCD due to risks of harmful side effects.
    - **Ethics:** Jason's parents would have had to give consent on his behalf; some procedures of ERP were altered to accommodate his age and ASD needs.
  - **Application to everyday life:** CBT and SSRIs are frequently used OCD treatments.
  - **Individual explanation:** SSRIs only treat one aspect: the individual's serotonin uptake, ignoring what may have caused the OCD symptoms to emerge, thus also being a **reductionist** approach for treatment.
  - **Situational explanation:** CBT considers the environment in which the compulsive behaviour takes place e.g. Jason's therapy addressed triggers in home and school environment in order to help prevent relapse.

CIE A2-LEVEL PSYCHOLOGY//9990

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