HL IB Psychology

Your notes

Treatment of Disorders: Biological Treatments of MDD & Phobias

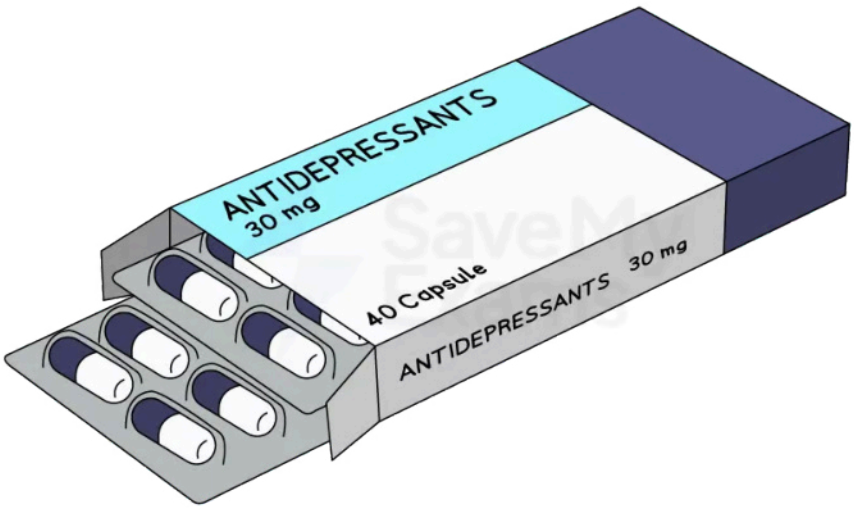
Contents

Biological Treatments of Major Depressive Disorder & Phobias

Your notes

What are Biological Treatments?

- **Biological treatments** are used to treat disorders such as **MDD** and **phobias** using **drug therapy**
- The use of drug therapy is in line with the **biomedical approach** to treating **disorders**
- The **depressed** or **phobic** patient is prescribed a drug that will work on the **physical** cause of the disorder e.g. **brain chemistry**
- **Antidepressants** are widely used to treat a range of disorders as well as MDD e.g. **OCD, GAD, PTSD** which means that they treat the symptoms of **depression** and also the symptoms of **anxiety disorders** (which include phobias)
- Examples of widely **prescribed** antidepressants are:
  - **Selective Serotonin Reuptake Inhibitors** (**SSRIs**): they work by increasing the amount of serotonin available in the **synaptic cleft** e.g. **fluoxetine, citalopram**
  - **Serotonin-Noradrenaline Reuptake Inhibitors** (**SNRIs**): they work in a similar way to SSRIs but are considered more effective than SSRIs e.g. **duloxetine, venlafaxine**
  - **Monoamine Oxidase Inhibitors** (**MAOIs**): they work by increasing the amount of neurotransmitters such as **serotonin** in the brain e.g. **phenelzine, tranylcypromine**

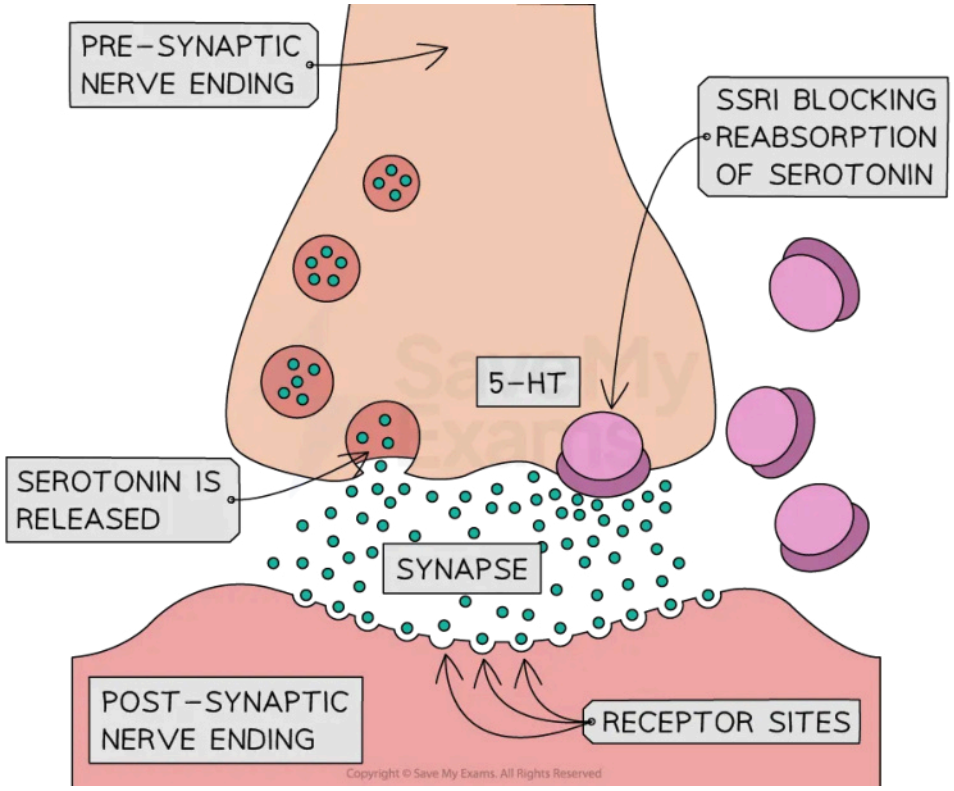


Antidepressants may provide a quick, easy and cheap solution for a range of disorders.

Your notes

How are biological treatments used to treat MDD & phobias?

- The most widely prescribed form of antidepressant is the SSRI which works to prevent the **reuptake** of serotonin in the synaptic cleft back into the **presynaptic neuron** and thus increase available serotonin in the brain
- Serotonin levels have been linked to depressive symptoms (e.g. low or disrupted levels of serotonin have been implicated in the onset of MDD) - this is known as the **monoamine hypothesis**



SSRIs work by preventing serotonin molecules from being absorbed back into the presynaptic neuron.

- Phobias are less likely to be treated with SSRIs than MDD is
- MAOIs are less likely to be prescribed for MDD as they tend to work best on anxiety disorders such as **panic disorder,** phobias and PTSD
- MAOIs are a long-established drug therapy prescribed for a range of disorders, having been introduced in the 1950s

- Phenelzine, which is a MAOI, has been found to be effective in reducing the symptoms of phobias, **social phobia** in particular


Your notes

Evaluation of biological treatments for MDD & phobias

Strengths

- Drug therapy has resulted in far fewer people being **hospitalised**, instead patients are able to manage their disorder, giving them more freedom and **autonomy** as a patient
- Drug therapy is **cheap** and immediately available unlike **therapy** e.g. **CBT**, which requires a **trained therapist**, is conducted over months or even years and in many cases means that the patient has to join a **waiting list** for treatment

Limitations

- SSRIs are the most common treatment for MDD, but there is still some (quite heated) **debate** as to their efficacy in treating MDD and other disorders i.e. some clinicians argue that they produce a **placebo effect**
- The debate surrounding antidepressants and the monoamine hypothesis generally may be due to **multiple factors**, probably based on the idea that depression is a group of disorders with several underlying pathologies rather than one distinct disorder (Lee et al. 2010)

Which studies investigate biological treatments for MDD & phobias?

- **Kroenke et al. (2001) –** SSRIs used to treat MDD
- **Liebowitz et al. (1988) –** MAOIs used to treat phobias

EXAM TIP

Make sure that you have learned the names of the different types of drug treatments so that your essay response has authority. Make sure you don't confuse the names of the drugs (e.g. SSRI and SNRI are almost identical) as this will reduce the quality of your response.

Kroenke et al. (2001)

Key study one (a biological treatment for MDD): Kroenke et al. (2001)

Aim: To compare the effectiveness of three **SSRIs** (**paroxetine, fluoxetine** and **sertraline)** in **treating MDD**, using a **large-scale randomised clinical trial.**

Participants:

- 573 patients with MDD from 37 **clinics** across the USA
- The participants were aged 19–96 years old (**mean** age=46 years)
- 79% of the sample were female; 21% were male
- The **ethnic distribution** of the sample was 84% Caucasian, 13% Black and 3% other
- Each patient had been recommended for the study by their main **clinician on** the basis of their suitability for **treatment** with SSRI **antidepressants**

Procedure:

- The participants completed a **baseline assessment** over the telephone and were **randomly assigned** treatment via one of the SSRIs (189 were given paroxetine; 193 were given fluoxetine; 191 were given sertraline) for a period of 9 months
- At intervals of 1, 3, 6 and 9 months each participant completed a 36 item **Mental Component Summary Score (MCSS) health scale** with **standardised questions** designed to measure **symptoms** of MDD
- The participants also completed **self-reports** on **multiple measures** of other **variables** (which were designed to be used in conjunction with the MCSS **data**), for example, **social and work functioning, physical functioning, sleep, memory and pain**

Results:

- 79% of participants completed the full 9 month treatment programme
- All participants improved similarly, by a mean of between 15 and 17 points on the MCSS
- All of the participants saw an **improvement i**n depressive symptoms from 74% at baseline to 32% at 3 months and 26% at 9 months

Conclusion:

- SSRIs may be an effective treatment for MDD
- The SSRIs paroxetine, fluoxetine and sertraline appear to be similar in their effectiveness for the treatment of MDD

Your notes

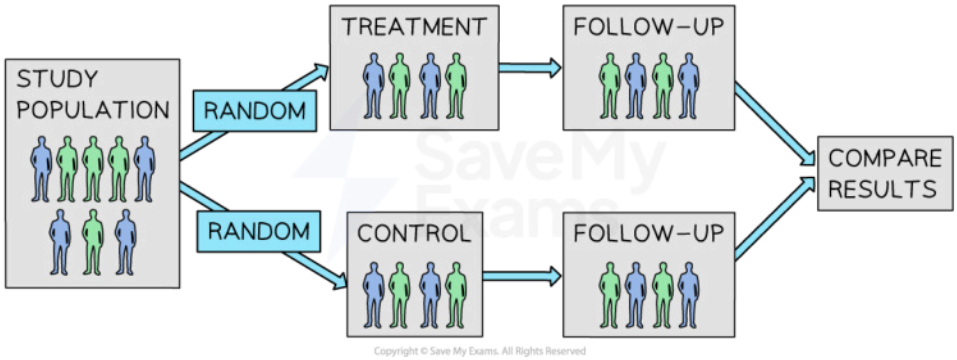
Evaluation of Kroenke et al. (2001)

Strengths

- **Triangulation of data** was implemented via the use of several different measures e.g. MDD symptoms, social functioning, sleep which increases the **reliability** of the findings
- The wide age range of the sample highlights the universal efficacy of SSRIs which increases the **external validity** of the findings

Limitations

- It is possible that some of the participants succumbed to the **placebo effect** i.e. their depressive symptoms improved because they believed that the drug they were taking would work i.e. a psychological rather than a biological explanation of their improvement
- As the participants were left to take their **medication** at home it is possible that not all of the participants **adhered** to this **medical regimen** which would mean that their MDD improved for other reasons: if so this would reduce the validity of the findings



Large-scale randomised clinical trials can show the efficacy of specific drugs

Liebowitz et al. (1998)

Key study two (a biological treatment for phobias): Liebowitz et al. (1998)

Aim: To investigate the effectiveness of the **MAOI phenelzine** as a treatment for **social phobia**

Participants: 80 patients aged 18–50 years old who had been diagnosed with social phobia.

Procedure:

- A l**ab experiment** with an **independent measures design**: each participant was randomly assigned to one of four groups:
  - Phenelzine treatment group
  - Placebo for phenelzine group
  - **Atenolol** treatment group (atenolol is a **beta blocker** drug used to treat **hypertension**)
  - Placebo for atenolol group
- The participants were given increasing doses of either phenelzine or atenolol or the placebo over the course of 8 weeks
- After the 8 week trial period was over the participants were assessed using the **Hamilton Rating Scale for Anxiety** and the **Liebowitz Social Phobia Scale**
- The Hamilton Rating Scale for Anxiety measures the **severity** of anxiety symptoms on a scale of 0 to 4 (4=severe)
- The Liebowitz Social Phobia Scale assesses the way that **social anxiety** plays a role in a variety of situations e.g. attending a party, eating in public, public speaking, measured on a scale of 0–3 (3=severe) and 0–3 (3=usually)

Results:

- The participants in the phenelzine treatment group had improved scores for anxiety compared to the placebo groups i.e. their social phobia had decreased over the course of the 8–week trial
- There was no significant difference seen in the atenolol group when compared to the placebo group i.e. atenolol does not appear to improve social phobia

Conclusion: Phenelzine appears to be an effective treatment for social phobia.

Evaluation of Leibowitz et al. (1988)

Strengths

- **Independent assessors** who were **blind** to the **condition** each participant was in i.e. drug or placebo, conducted the **clinical assessments** which increases the validity of the findings as it eliminates **bias**
- The findings support the idea that phobias should be treated with medication other than SSRIs as the symptoms are more in line with anxiety disorders than depressive disorders

Limitations

Your notes

- A sample of 80 participants divided across 4 conditions means that the number of participants per condition is likely to be 20 which decreases reliability due to the reduced **statistical power** of the sample size.
- An independent measures design runs the risk of **individual differences** affecting the results i.e. some of the participants may simply have more **resilience** than others and thus be able to deal with their phobias more successfully than others

Key terms: MAOI Beta-blocker Social phobia


Your notes

EXAM TIP

Your examiner will not award marks for the number of evaluation points you use in your critical thinking. You can use just a few evaluation points as long as you discuss them *in depth* rather than giving a superficial, surface-level analysis of key issues. Make sure you develop each evaluation point so that you discuss each point fully rather than just making a series of statements.