



## Treating Schizophrenia

The focus of this Factsheet is treatments for schizophrenia. Keywords are highlighted throughout the text and the relevant definitions can be found in the glossary at the end of the Factsheet. A worksheet is included with examination style questions, which can help you to develop your comparative skills.

The examiner will expect you to be able to describe and evaluate the use of different methods in the treatment of schizophrenia, such as:

- Drug therapy
- Cognitive behaviour therapy
- Family therapy
- Token economies
- The interactionist approach

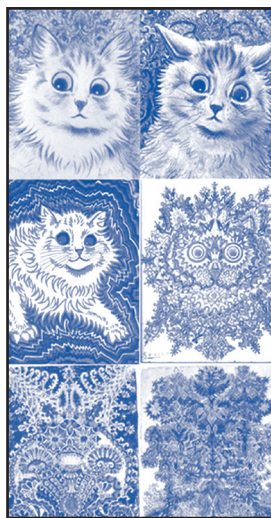
**Exam Hint:** Some questions may ask you to compare or contrast, however even if it is not explicitly asked for in the question, it is perfectly acceptable (and even advisable) to bring comparison into your essays, as it shows evidence of higher level thinking.

### Schizophrenia

**Schizophrenia** is a severe mental health disorder characterised by psychosis and the inability to recognise reality. About 1% of the population suffers with schizophrenia and it is more typically diagnosed in men rather than women. Symptoms can broadly be categorised into two types; positive and negative. **Positive symptoms** are those which happen in addition to everyday experiences, including **hallucinations** and **delusions**, whereas **negative symptoms** are those that take away from everyday experiences, such as **avolition** and **speech poverty**.

### Treatments for Schizophrenia

Drug therapy aims to treat the symptoms of schizophrenia by addressing the imbalance of chemicals in the brain. The dopamine hypothesis suggests that schizophrenia is caused by **hyperdopaminergia**. Drug therapy aims to reduce levels of dopamine by blocking dopamine receptors at the synapse. Drugs for schizophrenia are known as **antipsychotic** medications. There are two main types; typical antipsychotics, an older class of drugs including chlorpromazine and the newer, atypical antipsychotics, including clozapine and risperidone.



Paintings created by Louis Wain, an artist with schizophrenia. The pictures illustrate his gradual decline as the symptoms of his schizophrenia worsen.

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**Cognitive behavioural therapy** (CBT) is a psychological treatment of schizophrenia and aims to address symptoms by encouraging patients to challenge their irrational thoughts, delusions and hallucinations. The theory behind CBT believes that by finding evidence against or arguing against irrational beliefs, patients can begin to change how they think, which can consequently improve their symptoms.

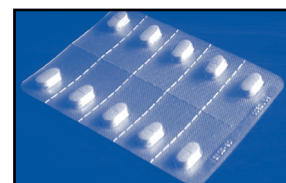
Family therapy is a second psychological treatment of schizophrenia. Research by Brown (1956) suggested that high levels of expressed emotion, including verbal criticism, hostility or emotional over involvement within a family is implicated in the development and **relapse** of schizophrenia. Family therapy aims to reduce levels of expressed emotion by trying to reduce stress, anger and guilt within the family and by improving knowledge and reducing stereotypes about schizophrenia.

**Token economy** is a behavioural technique used in the management of schizophrenia. When living in a mental health institution, patients with schizophrenia can develop patterns of maladaptive behaviours (e.g. not showering leading to poor hygiene) as a result of **institutionalisation**. Token economy aims to reduce these behaviours through the principles of **operant conditioning**. When patients display a desired behaviour, they would be given a token as a **secondary reinforcer**, and when they then reach the required number of tokens, patients can then trade in their tokens for a bigger reward, such as time watching television. The interactionist approach to treatments combines the use of both biological and psychological therapies where patients may be given varying combinations of the therapies outlined above.

**Exam Hint:** Make sure that you are confident in describing, evaluating and comparing these treatments. In an examination, you may be asked to describe any one of these alone or discuss two or more in less detail - so you must learn all of them!

### Effectiveness of Treatment

Drug therapy is an effective way to treat the symptoms of schizophrenia and there is a wealth of evidence to support this. Thornley et al. (2003) conducted a **meta-analysis** of 13 studies involving over 1000 patients. Patients were given chlorpromazine or a **placebo**, and the improvement of their symptoms was compared. Chlorpromazine was shown to be associated with reduced symptom severity and increased functioning of the patient. Similarly, CBT was proven to be effective. Jauhar et al. (2014) reviewed the results of 34 studies investigating cognitive behaviour therapy and schizophrenia, and found that CBT has a significant effect in reducing positive and negative symptoms of schizophrenia.



Risperidone, a typical antipsychotic used in the treatment of schizophrenia  
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In contrast to this, family therapy has only been found to be moderately effective. Pharoah et al. (2010) reviewed the effectiveness of family therapy as a treatment method through a meta-analysis. Although it was concluded that there was some evidence to suggest it improved the quality of life for schizophrenic patients and their families, it was suggested that there were some inconsistencies with the results. Whereas in similar meta-analyses, drug therapy has been reliably found to work well (Thornley et al. 2003) and so has CBT (Jauhar et al. 2014), which could suggest that they are both superior treatments in comparison to family therapy.

However, drug therapy is not 100% effective for all patients. Loebel et al. (1992) found that after being treated with atypical anti-psychotic drugs for a year, 16% of patients failed to make any improvements in their symptoms. However, Sensky et al. (2000) found that CBT was highly effective in treating patients who hadn't responded to drug therapies. In this instance, it could be concluded that CBT is a more effective treatment for schizophrenia as it is likely to reliably reduce symptoms in the greatest number of people.

**Exam Hint:** It is important that your essays don't simply list what each of the therapies say about a certain point. List-like essays wouldn't score very highly in an examination! It is much better to just pick the relevant therapies for the point you have chosen and explain them well, rather than trying to fit points in where they won't necessarily make sense.

### Risk of Relapse

One of the main limitations of using drug therapy to treat schizophrenia is the risk of relapse. Gitlin et al. (2001) found that 78% of patients withdrawn from antipsychotic medication relapsed within a year, and the figure was even higher at 96% within two years. Considering that some patients with schizophrenia may find it difficult to reliably take their medication and that some patients may be likely to discontinue their medication due to the side effects, the risk of relapse for drug therapy can be said to be quite high.

In contrast, patients treated with CBT maintain improvements and can go on to make further improvements. Sensky et al. (2000) found that patients in their study continued to improve up to nine months after the treatment had ended. Similarly, Pharoah et al's (2010) research into family therapy found that there is some evidence to suggest that engaging in family therapies can reduce the relapse rates of schizophrenia and subsequent hospital readmissions over the course of a year.

However, it has been found that the interactionist way of treating schizophrenia is superior in reducing relapse rates. When using a combination of drug, family and cognitive behavioural therapies, Hogarty et al. (1986) found a relapse rate of 0%, clearly demonstrating that the interactionist method is a superior treatment in contrast to the other treatment methods for schizophrenia.



**Drowsiness is one of the main side effects of taking antipsychotic medication. Weight gain and blurred vision are also quite common.**

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**Exam Hint:** One mistake that students often make when comparing is that they compare two theories/treatments on different points. You can't contrast the effectiveness of drug therapy with the relapse rates of cognitive behaviour therapy! Ensure that you firstly decide on what your comparison point will be, then discuss each theory/treatment in relation to that point.

### Treatment of Symptoms

As already discussed, both drug therapy and cognitive behavioural therapy have been shown to be successful in the treatment of schizophrenia as they have both significantly reduced the severity of the **primary symptoms** associated with schizophrenia (Thornley et al., 2003; Jauhar et al., 2014).

In contrast, token economy is used mainly in the management of schizophrenia. It doesn't address the primary symptoms of the disorder but instead focuses on improving the quality of the patient's life by addressing the **secondary symptoms**, which are often caused by primary symptoms or the effects of institutionalisation (i.e. poor hygiene). Although this would be beneficial for the patient, it doesn't really treat the main symptoms of schizophrenia.



**Token economy works to improve secondary symptoms of schizophrenia, such as addressing poor hygiene by encouraging patients to brush their teeth.**

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Similarly, family therapy also doesn't target the symptoms of schizophrenia in the way that drug therapy or CBT would. Psychological research has suggested that patients living in families with high expressed emotion are more likely to relapse compared to patients living on their own (Bebbington and Kuipers, 1994). As such, family therapy aims to reduce the stresses within the family to then reduce the risk of relapse, rather than contributing directly to reducing the primary symptoms associated with schizophrenia.

In this respect, it could be argued that drug and cognitive behaviour therapies are perhaps more beneficial to patients as they address the positive and negative symptoms of schizophrenia directly, which suggests that they may be more effective in treating schizophrenia.

**Exam Hint:** Sometimes in comparison, it may be beneficial to conclude your point by discussing which theory/treatment is best. When doing this, make sure that your conclusions are formed based on the argument that you have presented, not on your personal opinion.

### The Role of the Patient

When taking part in CBT, patients take a highly active role in their recovery. From the beginning, right through to the end of the therapy, the patient works alongside their psychologist to try and reduce irrational thoughts and beliefs. As part of the therapy, the therapist should, as much as possible, encourage the patient to challenge their negative thoughts themselves, perhaps by finding evidence against their irrational thought or by using logic to counteract it. This has the added bonus that it teaches the patient how to cope independently with their delusions and hallucinations, which may contribute to the smaller risk of relapse, as found in Sensky et al's (2000) research.

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In contrast, token economy is a therapy in which patients take a more passive role. It could be argued that the patient does very little work in improving the behaviour themselves, and the responsibility is more on the healthcare worker to maintain the therapy. This could be seen as a limitation of the therapy, as when patients are stable enough to live independently, the gains made through token economy may be lost if behaviours are unable to be reinforced. It could therefore be argued that CBT is a superior treatment in this respect.



You might have an image of therapy as a patient lying back listening to a therapist - this is not the case with CBT!

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**Exam Hint:** As with all AO3 points, it is the quality of the point you make that is the most important thing; including fewer well explained comparison points in your essay is always going to get you a higher score than more points explained poorly.

### Severity of Symptoms

It was discussed above that one of the positives of cognitive behavioural therapy is that the patient is actively involved in their recovery. However, this requires a degree of commitment and insight into their condition as well as the ability to challenge their thought processes, which not all patients will possess. If a patient is unable or unwilling to put the effort into cognitive behaviour therapy, due to symptoms such as avolition, the therapy is unlikely to be effective. Tarrier et al. (1993) found a 47% **attrition rate** in CBT, which could perhaps be attributed to the high demands placed on the patient.



Avolition; the extreme lack of motivation

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In contrast, drug therapy might be considered to be more useful, as it requires very little effort from the patient in order to be effective. Drug therapy can be administered in a variety of different ways including orally and via injection, and so patients who are responsible enough can take medication independently. If symptoms are so severe that patients wouldn't be able to manage their own treatment, it can be administered by healthcare professionals.

The interactionist approach to treatment is a good compromise in this respect; by using a variety of treatments, some of the associated problems can be solved. If

patient's symptoms are so severe that they are unable to engage with the therapy, then drug treatment might be a great starting point to help them to make improvements. Once these improvements have been made, psychological therapies can then be added into the treatment programme, so that patients develop coping strategies themselves, and also gain the benefits from taking part in CBT. So, when dealing with treatment of patients with severe symptoms of schizophrenia, the best treatment could be to use a combination of therapies.

**Exam Hint:** When writing your essay, ensure that your points are clearly signposted and well explained. For example, one similarity/contrast between A and B is that... This is because A... similarly/in contrast, B argues that...

### Institutions

One of the limitations of token economy is that its use is limited to within the confines of a mental health institution. As already discussed, token economy requires a healthcare worker to manage the token economy, and without this the improvements made by patients are unlikely to last. McMonagle and Sultana (2009) reviewed research investigating token economies and schizophrenia and although they acknowledged that there might be some benefits in helping to treat the secondary symptoms of schizophrenia, they also suggested that the durability and maintenance of the improvements after the end of the token economy programme are unclear. Similarly, Kazdin and Bootsin's evaluative review of token economy research (1972) suggests that more research into the generalisability of token economies is needed.



B.F. Skinner, whose work into Operant Conditioning inspired token economy

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Bebbington and Kuipers (1994) found that patients were more likely to relapse when living with families with high levels of expressed emotion compared to those living on their own. For patients living within an institution, family therapy may be beneficial to reduce conflict and stress within the family before patients are discharged. This suggests that they would be less likely to relapse if they move back in with their families, as levels of expressed emotion have been reduced. This would argue that family therapy would be useful for patients living in an institution as it will benefit them after they leave, compared to token economy.

Drug therapy can also be useful within institutions, as antipsychotic medication can be delivered by healthcare workers to those patients unable to look after themselves. However, there has been some criticism of the use of drug therapy within institutions. Some antipsychotic medications, as well as treating schizophrenia, have **sedative** properties. While this might be useful sometimes in dealing with agitated or aggressive patients, some healthcare workers have been criticised for using these drugs to make patients easier to manage, which is known as **chemical cosh**. This is undoubtedly unethical and shows that the use of drug therapy within institutions can be somewhat controversial.

**Exam Hint:** Think about what keywords in examination questions are asking you to do. Describe requires you to focus on factual knowledge about the therapy, whereas evaluate is asking you to discuss both strengths and limitations. Essays which contain the word discuss, expect both a description and evaluation. You could also be asked to compare; which means to discuss similarities or dissimilarities. Whereas contrast or distinguish means you should focus on highlighting the differences between theories or treatments.

## Conclusion

In conclusion, it is hard to make an overall judgement about which treatment of schizophrenia is the best. There are a multitude of factors to consider and the bottom line is that different methods may be more or less suitable for different patients. This Factsheet can provide an overview of the realities of treating a patient with schizophrenia. The comparison points detailed are by no means a definitive list and you may wish to consider alternative points such as the implications for the economy (which provides a research methods link), or the associated side effects the theoretical basis for each therapy. Whatever points you choose to explore, make sure they are supported by reference to research evidence.

## GLOSSARY

<b>Antipsychotic Medications:</b>	Drugs used to treat psychotic conditions such as schizophrenia.
<b>Attrition Rate:</b>	The number of people who drop out during a treatment or study.
<b>Avolition:</b>	Loss of motivation and extreme apathy.
<b>Chemical Cosh:</b>	Use of sedative medications to pacify an agitated or disruptive patient within an institution.
<b>Cognitive Behavioural Therapy:</b>	A psychological therapy for schizophrenia, encouraging patients to challenge their irrational thoughts.
<b>Delusions:</b>	Positive symptom of schizophrenia; irrational beliefs a sufferer thinks are true (e.g. that they are being persecuted by the government.)
<b>Hallucinations:</b>	A positive symptom of schizophrenia; sensory experiences, such as hearing voices which have little or no basis in reality.
<b>Hyperdopaminergia:</b>	Theory that schizophrenia is caused by high levels of dopamine in the sub cortex.
<b>Institutionalisation:</b>	Where patients develop deficits in skills as a result of being placed within residential care.
<b>Meta-analysis:</b>	A study which collates data from several studies to form an overall conclusion.
<b>Negative Symptoms:</b>	Atypical symptoms of schizophrenia associated with the loss of normal functioning.
<b>Operant Conditioning:</b>	Learning through the consequences of one's actions.
<b>Placebo:</b>	A substance that produces no biological effect; often used as control in medical research.
<b>Positive Symptoms:</b>	Atypical symptoms that are additional to normal functioning e.g. hallucinations.
<b>Primary Symptoms:</b>	Symptoms intrinsic to schizophrenia, i.e. hallucinations and delusions.
<b>Relapse:</b>	The deterioration of symptoms after a period of recovery.
<b>Schizophrenia:</b>	A mental health disorder, often characterised by psychosis and the inability to recognise reality.
<b>Secondary Reinforcer:</b>	A reinforcement which in itself has no value. It only has value when traded in for further rewards.
<b>Secondary Symptoms:</b>	Result from the primary symptoms of schizophrenia; e.g. dependence and poor coping skills.
<b>Sedative:</b>	Calm or sleep inducing.
<b>Speech Poverty:</b>	A negative symptom of schizophrenia; a severe reduction in speech.
<b>Token Economy:</b>	A therapy designed to encourage desirable behaviours (such as showering) in patients suffering from institutionalisation; Based on the theory of operant conditioning.

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**Worksheet: Treating Schizophrenia**

Name: \_\_\_\_\_

1. Distinguish between drug therapy and cognitive behaviour therapy in the treatment of schizophrenia.

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2. Briefly compare two psychological therapies for schizophrenia.

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3. Kimmy and Lilian are both nurses working with patients who have schizophrenia. Kimmy believes that the best therapy is drug therapy as it works well and directly targets the symptoms of schizophrenia. However, Lilian argues that she has seen patients who are on a token economy programme make great improvements in their behaviour. Compare and contrast the use of drug therapy and token economy with reference to the nurses.

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4. Outline and evaluate two treatments for schizophrenia.

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5. Discuss the use of token economies in the management of schizophrenia. Refer to another method of treatment in your answer.

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