

Outline and evaluate **one or more** biological explanation of schizophrenia.

AO1

Genetic Factors:

- SZ runs in families
- probability of SZ in general population = 1%

- **Family Studies** - SZ is more common among biological relatives, the greater the degree of relatedness the greater the risk
- children with 2 SZ parents = 46% risk
- children with 1 SZ parent = 13% risk

- **Twin Studies** - meta-analysis
- MZ twins = over 40%
- DZ twins = over 7%

- **Adoption Studies** - 164 adoptees, Finland
- biological mothers diagnosed with SZ
- 6.7% children diagnosed
- (4.2% control group diagnosed)
- genetic liability to SZ "decisively confirmed"

The Dopamine Hypothesis:

- "Neurotransmitters are chemical messengers that carry, boost or moderate signals between neurons"
- SZ results from having an excess of the neurotransmitter dopamine
 - too much dopamine
 - too many dopamine receptors
 - dopamine receptors too sensitive
- Dopamine found in the limbic system, disturbance in processes leads to problems in perception experienced by SZ's.

AO2

P: Genetic research may be useful in trying to identify a specific gene that might be responsible for causing schizophrenia.

E: Sherrington has linked schizophrenia to an abnormality on chromosome 5, although these findings have not been replicated by others.

E: Hong et al found that a variation of the TPH gene was significantly more common in Chinese SZ patients than in Chinese controls.

L: This suggests that there is a biological basis for schizophrenia as there is are specifically identified genes that are maladaptive in comparison to the rest of the population.

P: There are issues with the research evidence in adoption studies.

E: Clearly, not all schizophrenic mothers give their children up for adoption as many are still capable of parenting.

E: This means that there may be something different about these mothers that made them give their children up for adoption.

L: These differences may provide other reasons for the onset of SZ in the children.

P: Amphetamines support the dopamine hypothesis.

E: They increase the amount of excess dopamine which floods the synapses.

E: This causes hallucinations and delusions, similar effects to the characteristic factors of schizophrenia.

L: This provides evidence for the increase in dopamine as the responsible factor for schizophrenia as an increase caused by this drug causes positive symptoms.

Golden Nuggets

Family Studies

Twin Studies

Adoption Studies

Excess Dopamine

Limbic System

Identifying Gene

Adoption Issues

Amphetamines