Explanations of schizophrenia

Lesson 3.1.2 | Clinical psychology

Core ideas

The dopamine hypothesis links unusual dopamine activity with symptoms such as hallucinations and delusions.

Genetic explanations suggest risk can run in families, but genes do not make schizophrenia inevitable.

Cognitive explanations focus on unusual thought processes, attention, interpretation and monitoring of inner speech.

A strong explanation should account for different symptoms, individual differences and evidence from more than one method.

Compare genetic explanations, the biochemical dopamine hypothesis and cognitive explanations. Family resemblance can support genetic vulnerability but shared environments prevent a simple genes-only conclusion.

The dopamine hypothesis proposes that disturbed dopamine transmission contributes to psychotic symptoms. Evidence that dopamine-blocking medication helps symptoms is relevant, but a treatment effect alone cannot prove a single original cause.

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Key terms

Biological explanation: An explanation based on genes, brain activity or body processes.

Dopamine hypothesis: The idea that unusual dopamine activity contributes to schizophrenia symptoms.

Genetic vulnerability: Inherited risk that may increase the chance of developing a disorder.

Cognitive explanation: An explanation based on thinking, attention or interpretation processes.

Inner speech: Internal verbal thought that may be misinterpreted in some explanations.

Reductionism: Explaining a complex disorder too narrowly through one factor only.

Further detail and evidence

Cognitive accounts explain how difficulties monitoring internal events or interpreting evidence can lead to voices or threatening interpretations. Evaluate these accounts using individual differences, nature/nurture, reductionism/holism and determinism/free will.

Genetic evidence compares biological relatives with different degrees of shared genes. Higher concordance among identical than non-identical twins is compatible with genetic vulnerability. Concordance below 100% shows that inherited similarity is insufficient as a complete explanation; shared upbringing and assessment must also be considered.

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Lesson 3.1.2 | Clinical psychology

Continued

Dopamine account: altered dopamine signalling, particularly excessive activity in some pathways, is linked with positive symptoms. The relationship is more complex than all brain areas having too much dopamine. Cognitive accounts propose faulty source monitoring: an internally generated thought may be experienced as an external voice.

Applying the ideas

A threatening interpretation of an ambiguous glance illustrates cognitive appraisal. A dopamine-blocking treatment reducing voices is consistent with biochemical involvement, but reducing a symptom does not identify its sole original cause. Genetic risk and learned interpretations can operate at different explanatory levels.

Evaluation and connections

Biological explanations allow objective investigation and targeted treatments, but can be reductionist or deterministic. Cognitive explanations address the meaning of individual experiences but may rely on retrospective reports. A correlation between unusual cognition and symptoms cannot establish which came first. Compare what each theory explains about both positive and negative symptoms.