



Study Uncovers Shared Root Cause for Multiple Psychiatric Disorders

Description

A recent discovery found that eight different mental health conditions have the same genetic basis. A new study looked closer at these shared genes to learn more about them. Many of these genes are active for longer in the brain's development stages and could affect multiple areas, making them potential targets for new treatments.

These genes are also connected to many other proteins, which could lead to wide effects on the brain if changed."Scientists found 109 genes linked to eight mental health disorders like autism, ADHD, and schizophrenia."

These conditions may have similar symptoms or appear together in families. By studying these shared and unique genes, researchers identified 683 variants that impact brain cell development. These genes are involved in regulating different stages of brain development and impacting various brain cells.

Understanding these shared genes could help in developing treatments for multiple mental health conditions. With almost 1 billion people globally living with mental health issues, this research could make a big difference.

The study was published in the journal Cell.

Vocabulary List:

1. **Conditions** /kən'dɪʃənz/ (noun): States of being or circumstances that affect an individual or group.
2. **Genetic** /dʒə'netɪk/ (adjective): Relating to genes or heredity.
3. **Variants** /'vɛəriənts/ (noun): Different forms or versions of something especially in biological contexts.
4. **Development** /dɪ'vel.əp.mənt/ (noun): The process of developing or being developed such as growth or evolution.
5. **Regulating** /'rɛgjuˌleɪtɪŋ/ (verb): Controlling or maintaining the rate or speed of a process.
6. **Disorders** /dɪs'ɔːdərz/ (noun): An interruption of normal physical or mental functions.

Comprehension Questions

Multiple Choice



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1. How many mental health conditions were found to have the same genetic basis in the recent discovery?
 - Option: Four
 - Option: Six
 - Option: Eight
 - Option: Ten

 2. What is a potential outcome of genes being active for longer in the brain's development stages?
 - Option: Reduced brain development
 - Option: No impact on brain development
 - Option: Affecting multiple areas
 - Option: Faster brain development

 3. How many genes were found to be linked to eight mental health disorders like autism, ADHD, and schizophrenia?
 - Option: 75
 - Option: 92
 - Option: 109
 - Option: 125

 4. What is the main focus of the study in understanding shared genes in mental health conditions?
 - Option: Developing new drugs
 - Option: Identifying symptoms
 - Option: Regulating brain cell development
 - Option: Expanding gene databases

 5. How many variants impacting brain cell development were identified by researchers?
 - Option: 491
 - Option: 582
 - Option: 683
 - Option: 750

 6. In which journal was the study published?
 - Option: Nature
 - Option: Science
 - Option: Cell
 - Option: The Lancet



True-False

7. Genes active in brain development stages do not affect multiple areas.
8. Shared genes in mental health conditions could lead to wide effects on the brain if altered.
9. All mental health conditions with the same genetic basis exhibit identical symptoms.
10. Understanding shared genes is unlikely to help in developing treatments for multiple mental health conditions.
11. The study identified 590 variants that impact brain cell development.
12. Almost 1 billion people globally are living with mental health issues.

Gap-Fill

13. Scientists found _____ genes linked to eight mental health disorders like autism, ADHD, and schizophrenia.
14. Researchers identified _____ variants that impact brain cell development.
15. The shared genes hold potential for developing new treatments for multiple mental health conditions due to their impact on various brain cells in different _____ of brain development.
16. Understanding the genetic basis of mental health conditions could make a significant difference for the over _____ people globally living with such issues.
17. The recent discovery highlighted the shared genes among mental health conditions, which may have similar symptoms or appear together in _____.
18. The study on the genetic basis of mental health disorders was published in the journal _____.



Answer

Multiple Choice: 1. Eight 2. Affecting multiple areas 3. 109 4. Regulating brain cell development 5. 683 6. Cell

True-False: 7. False 8. True 9. False 10. False 11. False 12. True

Gap-Fill: 13. 109 14. 683 15. stages 16. 1 billion 17. families 18. Cell

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Who are scientists who study celestial objects like stars planets and galaxies?

Option: Biologists

Option: Meteorologists

Option: Astronomers

Option: Geologists

2. Which state of matter has a definite volume but takes the shape of its container?

Option: Solid

Option: Gas

Option: Liquid

Option: Plasma

3. What are medications used to treat bacterial infections called?

Option: Painkillers

Option: Vitamins

Option: Antibiotics

Option: Antihistamines

4. What force is responsible for keeping planets in orbit around the sun?

Option: Magnetic

Option: Nuclear

Option: Gravitational

Option: Frictional

5. Which type of radiation has a wavelength just shorter than that of visible light?



- Option: Infrared
- Option: Ultraviolet
- Option: X-ray
- Option: Gamma-ray

6. The process of growth maturation and change in living organisms is known as what?

- Option: Decay
- Option: Development
- Option: Stagnation
- Option: Destruction

7. What is the term for a general decline in mental ability severe enough to interfere with daily life?

- Option: Depression
- Option: Anxiety
- Option: Dementia
- Option: Paranoia

8. What product can be applied to the skin to protect it from the harmful effects of the sun?

- Option: Body lotion
- Option: Sunscreen
- Option: Perfume
- Option: Makeup

9. What term is used to describe the effect or influence of one thing on another?

- Option: Collision
- Option: Impact
- Option: Avoidance
- Option: Detachment

10. What is the systematic investigation into and study of materials and sources to establish facts and reach new conclusions?

- Option: Guesswork
- Option: Research
- Option: Imagination
- Option: Supposition

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. A _____ planet is one that has conditions suitable for life to exist.

12. _____ variants can play a role in the development of regulating disorders.



13. Excessive exposure to ultraviolet _____ can cause skin cancer.
14. In case of a gravitational impact it is crucial to have a plan for _____ to minimize risk.
15. A new asteroid was _____ in orbit around Jupiter.
16. Antibiotics are often used to treat bacterial infections that cause _____.
17. People with light sensitivity may benefit from wearing _____ glasses.
18. _____ trials are essential in the development of new vaccines.
19. The asteroid's _____ orbit indicated its potential to come close to Earth.
20. One way to reduce damage from solar radiation is to _____ exposure to the sun.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. Scientists conducted extensive to understand the effects of the new medication.
22. An is a small rocky body that orbits the sun often found in the asteroid belt.
23. The moon stays in orbit around Earth due to the pull between the two celestial bodies.
24. A is a biological preparation that helps develop immunity to a specific disease.
25. Water is a common example of a substance that flows and takes the shape of its container.
26. Doctors prescribe to treat bacterial infections and prevent their spread.
27. Genetic can lead to different expressions of traits within a population.
28. As individuals age the risk of developing and other cognitive disorders increases.
29. Applying before going out in the sun can help protect your skin from UV rays.
30. Swelling redness and pain are common symptoms of caused by infections or injuries.

Answer

Multiple Choice: 1. Astronomers 2. Liquid 3. Antibiotics 4. Gravitational 5. Ultraviolet 6. Development
7. Dementia



8. Sunscreen 9. Impact 10. Research

Gap-Fill: 11. Habitable 12. Genetic 13. Radiation 14. Evacuation 15. Discovered 16. Inflammation 17. Tinted
18. Clinical 19. Astronomical 20. Minimize

Matching sentence: 1. Research 2. Asteroid 3. Gravitational 4. Vaccine 5. Liquid 6. Antibiotics 7. Variants
8. Dementia 9. Sunscreen 10. Inflammation

CATEGORY

1. Health - LEVEL2

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