Anorexia Nervosa from the Biological Perspective

Charli Wheeler

Anorexia Nervosa from the Biological Perspective

The biological perspective is a medical perspective of psychology, viewing abnormal behavior as brought on by genetic vulnerabilities, brain dysfunction and neural plasticity, neurotransmitter and hormonal abnormalities, or temperament. This analysis will focus on the genetic vulnerability component.

Genetic Vulnerabilities

Each cell contains 23 pairs of chromosomes, with one in each pair coming from each parent. These chromosomes contain genes, which control what traits and characteristics are inherited. In recent years, researchers have proven that these inherited genes also contribute to some abnormal behaviors, though they have not yet been able to isolate the specific genes (Comer, 2007).

A person who is genetically vulnerable to psychological disorders has inherited polymorphisms of genes that have caused problems with the autonomic nervous system, hormonal imbalance, or structural abnormalities in the central nervous system (Hooley, et al., 2019)

Genetic Vulnerabilities and Anorexia Nervosa

According to the DSM-IV-TR, Anorexia nervosa is a psychological disorder that usually manifests in adolescent females. It is characterized by restricting food intake, intense fear of gaining weight, and a disturbed self-perception of body weight. This is not alleviated by weight loss; in fact, this can make the fear of gaining worse (2022).

It's well known that anorexia has a genetic component. It is much more common in females than males, by a 10:1 ratio and it typically emerges in the mid-adolescent years. First-

degree relatives of individuals with anorexia have a ten times greater lifetime risk of having anorexia themselves.

Three linkage analyses have demonstrated evidence for susceptibility to anorexia, or similar eating disorders, on chromosome 1. Serotonin helps in the regulation of appetite and controls eating behavior and anorexia can be successfully treated with serotonin reuptake inhibitors, suggesting that serotonergic dysfunction could be a biological marker for anorexia. Dopamine dysfunction has also been implicated in anorexia. Lower dopamine metabolites are found in the cerebrospinal fluid of those with anorexia malnourishment, and this persists after recovery (Pinheiro, et al, 2009).

Compare and Contrast Sociocultural and Biological Perspectives on Anorexia

The sociocultural perspective consists of examining a person's social and cultural surroundings in order to understand abnormal behavior. It focuses on societal labels and roles, social networks and supports, family structure and communication, cultural influences, and religious factors (Comer, 2007).

Historically, sociocultural factors were considered to play the largest role in anorexia. It is most prevalent in cultures and settings in which thinness is considered beautiful, or in occupations in which it is considered necessary. Negative parental reactions to weight gain and pressure from peers to be thin can strongly contribute to anorexia. It can also be used as a form of control by an adolescent who feels as if they don't have much control in their lives.

Both the sociocultural and biological perspectives consider family to be a significant factor in anorexia. While the biological perspective focuses on the genetics passed from parent to child, the sociocultural perspective focuses on how the parents view weight and body image, which can also be passed on from one generation to the next.

Treatment between the two perspectives varies, with medication such as SSRIs heavily used in the biological perspective, and family counseling heavily used in the sociocultural perspective. Both agree that individual counseling of the affected person is strongly indicated, however.

Benefits and Risks of the Application of Multiple Theories

Most researchers agree that anorexia, and many other abnormal behaviors, require a multi-dimensional approach to treatment. This is because many variables contribute to these behaviors. Identical twins that have both inherited the abnormalities that can lead to anorexia may not both have it. This can come down to sociocultural factors. One twin may have a better support system in their peers or may face more peer pressure to be thin because of sports. By combining treatment approaches, practitioners can attack anorexia on all fronts.

The risk of this is that there are just too many treatments happening. Family therapy, medication, individual therapy, group therapy, medical therapy, etc, can all be overwhelming and lead to the individual with anorexia dropping out of treatment altogether. It can also be a logistical problem with different mental and physical health professionals providing different areas of care.

Summary and Conclusion

Genetic research has come a long way in the last few decades, particularly due to the Human Genome Project. This is hugely beneficial to researchers who are studying the cause of abnormal behaviors. A multi-dimensional approach that takes all factors that contribute to a condition like anorexia is going to be the most advantageous and lead to more successful treatment, however.

References

American Psychiatric Association. (2022). *DSM-5-TR* (5th ed.). Washington DC: American Psychiatric Association.

Comer, R. J. (2007). *Abnormal Psychology* (4th ed.). New York, NY: Worth Publishers.

Hooley, J. M., Nock, M. K., & Butcher, J. N. (2019). *Abnormal Psychology* (18th ed.). US: Pearson Education. Retrieved from https://capella.vitalsource.com/books/9870135191033

Pinheiro, A. P., Root, T., & Bulik, C. M. (2009). The Genetics of Anorexia Nervosa: Current Findings and Future Perspectives. *Int J Child Adolesc Health, 2*(2), 153-164. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2828778/#R18