

Appendix (A)

Educational Gaps in Epigenetics: A Cross-Sectional Study of Health Sciences Students' Knowledge and Perceptions

Section 1: demographic characteristics

- Gender:
 - Male
 - Female
- Age
 - Fill the blank (range of 16-35) years old
- College:
 - College of Science and Health Professions (COSHP)
 - College of Medicine (COM)
 - College of Applied Medical Sciences (COAMS)
 - College of Nursing (CON)
- Current academic level:
 - 1st year
 - 2nd year
 - 3rd year
 - 4th year
 - 5th year
 - 6th year
 - Internship year

Section 2: You will answer a “Yes/No” question about (general awareness of “Epigenetics”)

1. Have you heard of the term "Epigenetics"?
 - No
 - Yes
2. Are you familiar with the idea that epigenetic changes affect how genes are expressed?
 - No
 - Yes
3. Do you believe that epigenetic alterations could play a role in the development of diseases like cancer and diabetes?
 - No
 - Yes

4. Do you think stress can influence epigenetic processes?
 - No
 - Yes
5. Do you think that epigenetic changes can be passed down from one generation to the next?
 - No
 - Yes
6. Have you learned about how epigenetics plays a part in the development of mental health disorders?
 - No
 - Yes
7. Do you think that progress in epigenetics research will eventually lead to the advancement in personalized medicine?
 - No
 - Yes
8. Epigenetic mechanisms are permanent changes that alter the DNA sequence.
 - No
 - Yes
9. DNA methylation is one of the common epigenetic mechanisms.
 - No
 - Yes
10. Epigenetics changes the genotype without changing the phenotype.
 - No
 - Yes

Section 3: You will answer questions about (“Epigenetics” and its association with the brain and behaviour) in a Likert scale format the answers will range from strongly agree to disagree strongly.

11. Growing up in an environment characterized by social activity affects the development of a child’s brain.
 - A. Strongly Disagree

- B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
12. The development of a child's brain is influenced by life experiences and environmental factors, which affect gene expression.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
13. The life experiences, events, and environments of childhood play a role in either raising or lowering the risk of psychopathology in adulthood.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
14. Engaging in regular exercise activates beneficial genes and suppresses harmful ones, as a result reducing susceptibility to depressive disorders such as anxiety and stress.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
15. How parents raise their children influences the epigenetic configuration of the brain.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree

16. If identical twins were separated at birth and then reunited after years, they will have the exact way of thinking and personality as they have the same genome.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
17. A socially active environment does not play a role in the brain development of a growing child.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
18. Isolation from others or introverted tendencies do not affect the brain volume of adult.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
19. Epigenetic factors contribute to an individual's susceptibility to addiction.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
20. The public would benefit from increased awareness of the role of epigenetics in human health.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree

21. I believe that including epigenetics in the medical school curriculum should be mandatory.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
22. Epigenetic research can assist us in gaining a deeper understanding of how social factors impact the risk and prevention of diseases.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree
23. The education I received in medical school has sufficiently prepared me to understand the importance of epigenetics in human health.
- A. Strongly Disagree
 - B. Disagree
 - C. Neutral
 - D. Agree
 - E. Strongly Agree