Rhythms of resilience: individual differences in genetic and environmental effects on brain development

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Propositions

Accompanying the public defense of Lina van Drunen's dissertation *"Rhythms of resilience: Individual differences in genetic and environmental effects on brain development"* on June 18th, 2024.

1. The period between middle childhood and early adolescence represents a formative phase during which environmental factors impact the pace of structural brain development (this thesis).
2. Cognitive enrichment and deprivation affect structural brain development in distinct yet compatible ways (this thesis).
3. The combination of structural and functional MRI methodologies provides a complementary understanding of how neural individual differences arise (this thesis).
4. Middle childhood should receive more attention as a forming developmental phase when investigating the neural development of self-concept (this thesis).
5. Examining individual differences in development using longitudinal designs is key for identifying resiliency of youth.
6. Amid the rising prevalence of large longitudinal studies in Developmental Neuroscience, proficiency in data management and collection holds significant value, yet are frequently overlooked.
7. Fundamental research is pivotal as it lays the groundwork for innovative solutions, fosters deeper understanding, and informs the development of potential interventions.
8. Capturing brain-behavior associations is complex and warrants investigation through a multi-method and multi-disciplinary approach.
9. As academics, we should aim to implement engaging ways of communicating our findings to the public, as public understanding of science has a profound influence on research.
10. An academic journey embodies the characteristics of both a maze and a labyrinth. In a maze, the focus lies on the goal, usually searching for the exit. In a labyrinth, the goal holds less importance than the process itself; by navigating the path with its confusing twists, one will inevitably reach the exit.