

The Adolescent Brain and Positive Youth Development

JDAI Research and Policy Series

Adolescence is a period of intensive construction for brains, when the architecture of the brain is being built. Healthy brain development requires that our communities shield youth from trauma, while our systems also build-in positive supports for all young people. The latest neuroscience can further our efforts to provide rehabilitate supports to young people who come into contact with the juvenile justice system.

What We Know:

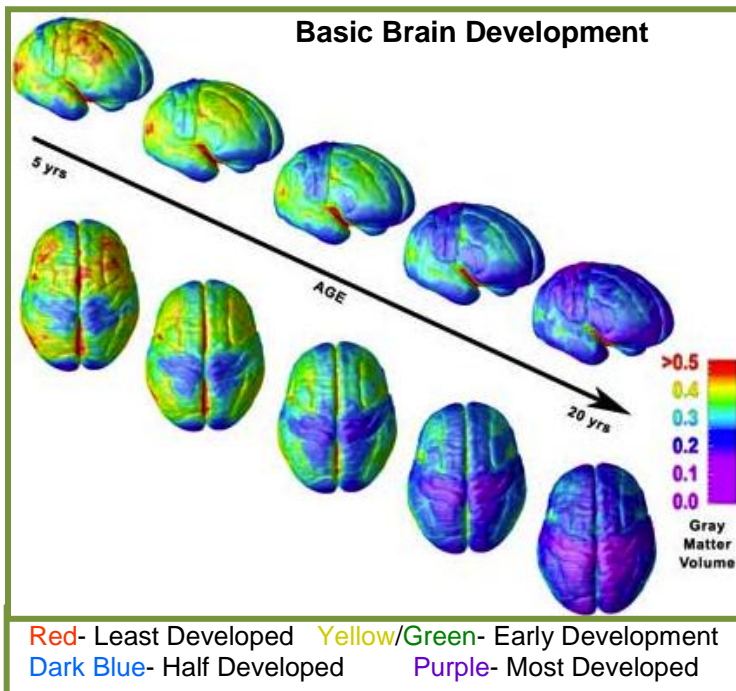
The adolescent brain is not fully developed until age 25.

- Risky behavior that can result in delinquency proceedings is the product of the interaction between the emotional region of the brain and the underdeveloped control region.²
- The regions of the brain develop at different rates, meaning that the pleasure-seeking and emotional regions mature in adolescence before the control region develops.³
- There is a rapid increase in brain matter in the reward-seeking area of the brain during puberty, but the region dealing with self-control develops gradually over the course of adolescence. This causes the juvenile to act impulsively because he or she lacks self-control and impulse regulation.⁴
- Experimentation and novelty-seeking behaviors are typical ways adolescents attempt to form their own identities and serve adaptive functions, such as socialization and procreation.⁵
- Research shows that the majority of juveniles stop their risky behaviors once they reach adulthood.⁶

There are three ways in which adolescents differ from adults and children¹

1. They lack mature capacity for self-regulation in emotional situations;
2. They have a heightened sensitivity to external influences, such as peer pressure and immediate incentives; and
3. They show less ability to make judgments and decisions that require future orientation.

- The National Research Council



Thompson, et al. *International Review of Neuro Biology*, 2005

The above graphic shows the development of the brain through age 20, however, brain development continues until age 25. Adolescence is the period of brain development in which the frontal lobe experiences profound development.

Peer pressure, substance use and trauma affect the development and functioning of the adolescent brain and behavior.

- Research shows that peers are 2 times more likely to engage in risky behavior when peers are present.⁷
- One study on alcohol use by adolescents shows that 15 and 16 year olds that chronically abused alcohol showed cognitive impairments even weeks after they stopped drinking.⁸
- Hormones released during stress affect the brains ability to think rationally and these hormones stay in a juvenile's system longer.

“From a moral standpoint it would be misguided to equate the failing of a minor with those of an adult, for a greater possibility exists that a minor’s character deficiencies will be reformed.”⁹

– U.S. Supreme Court

Promising Practices:

Practices that involve Positive Youth Development are nationally recognized in the treatment of juvenile offenders, as opposed to using adult practices. Positive Youth Development includes programs such as diversion¹⁵, restorative justice¹⁶, and mentoring.¹⁷ Probation and residential treatment programs that build Positive Youth Development principles into their programming through evidence and strength-based practices show more positive outcomes.

“An adolescent is at a crossroads of changes where emotions, hormones, judgment, identity and the physical body are so in flux that parents and even experts struggle to fully understand.”¹⁴ - ABA

Local Programs, Practices and Initiatives

- A number of police departments across Massachusetts have developed police-based diversion and prevention programs in partnership with local mental health providers. These programs allow the police to put treatment and services in place for the youth without entering them into the juvenile justice system.
- Diversion programs also exist at the level of the District Attorney's Offices. While the juvenile has already entered the justice system, it gives youth an opportunity to resolve their case, often without a formal record.

DEBUNKING THE SCARED STRAIGHT MYTH

Scared Straight programs that take youth on tours of prison facilities and utilize inmates to speak to the youth have been found to not only be ineffective, but harmful. The National Institute for Justice reports that in a study of 8 programs, Scared Straight programs were found to increase the odds that the juveniles would commit offenses in the future.¹⁸

Sources

^{1 & 3} National Research Council, *Reforming Juvenile Justice*, The National Academies Press (2013).

^{2 & 4} Steinberg, L., *Adolescent Development and Juvenile Justice*, Annu. Rev. Clin. Psychol. (2009).

⁵⁻⁶ National Research Council, *Reforming Juvenile Justice*, The National Academies Press (2013).

⁷ Gardner & Steinberg, *Peer Influence on Risk Taking, Risk Preference, and Risky Decision Making in Adolescence and Adulthood: an Experimental Study*, 41 Dev. Psychology 625 (2005).

⁸ Brown, Tapert, Granholm & Delis, *Neurocognitive functioning of adolescents: Effects of protracted alcohol use*, Alcoholism: Clinical and Experimental Research, 24, 164-171.

⁹ *Roper v. Simmons*, 543 U.S. 551, 570 (2005).

¹⁰ World Health Organization, *Adolescent Health*. http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en/

¹¹ Oregon Commission on Children and Families, *Best Practices: Positive Youth Development*.

<http://www.npcresearch.com/Files/Strengths%20Training%20Binder/44.%20Best%20Practices%20Positive%20Youth%20Development.pdf>

¹² VERA Institute of Justice, *Why Ask about Family?* (2011). <http://www.vera.org/sites/default/files/resources/downloads/Why-ask-about-family-Final.pdf>

¹³⁻¹⁴ American Bar Association, *Adolescence, Brain Development and Legal Culpability* (January 2004). <http://www.abanet.org/crimjust/juvjust/adolescence.pdf>

¹⁵ OJJDP regard diversion programs for juveniles as exemplary programs. <http://www.ojjdp.gov/pubs/iaibgbulletin/exemp.html>

¹⁶ Restorative Justice is a promising practice; research on this practice is in progress.

¹⁷ The National Institute of Justice recognizes mentoring programs as effective and being supported by research.

<http://www.crimesolutions.gov/PracticeDetails.aspx?ID=15>

¹⁸ The National Institute of Justice information on effectiveness of Scared Straight programs.

<http://www.crimesolutions.gov/PracticeDetails.aspx?ID=4>

Definitions

Adolescence: begins at the onset of puberty and ends when an adult identity is developed.¹⁰

Positive Youth Development: policy perspective that emphasizes providing services and opportunities to support all young people in developing a sense of competence, usefulness, belonging and empowerment.¹¹

Evidence-Based Practice: utilizing current reliable evidence to determine the proper policies and treatments for juveniles involved in the justice system.

Strength-Based Practice: identify resources to youth and families then use these as a basis to build skills needed to achieve goals.¹²

Brain Biology Terms:

Frontal Lobe: the part of the brain that controls the decision making process for adults, including long-term planning, risk-assessment, and impulse control.

Prefrontal Cortex: responsible for cognitive processing, problem solving, and emotional control; undeveloped in the adolescent brain.

Amygdala: responsible for impulse reactions, emotional reactions, fear and used in decision-making for adolescents.

Limbic System: responsible for the fight or flight survival response and controls instincts, sensations and feelings.

Gray Matter: the type of brain tissue that does the thinking¹³, in stage of development throughout adolescence.

- The recognition of the difference between adolescents and adults is evidenced in the recent passage of the Raise the Age legislation in Massachusetts. Youth are now considered juveniles for the purposes of the criminal justice system until they reach the age of 18.
- Massachusetts is one of the few states in the country that has an organized Court Clinic at the disposal of the Juvenile Court to assist with juveniles facing mental health and substance abuse issues.
- Various restorative justice programs exist across the state of Massachusetts, which focus on repairing the harm that results from the crime.

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The JDAI Research and Policy Series is provided by the **Juvenile Detention Alternative Initiative**, which seeks to ensure that *the right youth, is in the right place, for the right reasons*.

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