Moving Forward:

Advanced Concepts in Adolescent Brain Development

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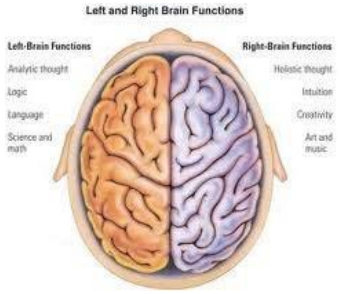
Cindy C. Cottle, Ph.D.

I. Overview of Adolescent Brain Structures and Function

A. Areas of the Brain



Division by Hemispheres: In general, the left hemisphere is dominant for language, logic, math functions while the right hemisphere is dominant for spatial abilities, face recognition, and music. The left side of the brain controls the right side of the body (sensory and muscles) while the right side of the brain controls the left side of the body.

Division by Lobes

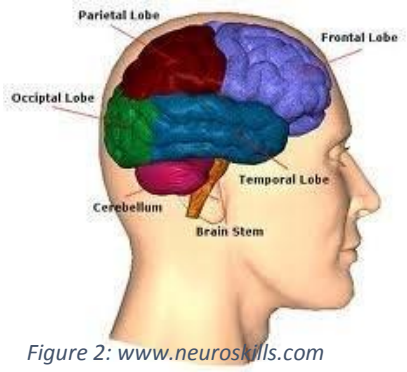


Figure 2: www.neuroskills.com

Occipital Lobe: Located at the back of the brain and is associated with interpreting visual stimuli and information. Damage may result in visual problems, including difficulties recognizing objects, inability to identify colors or words.

Temporal Lobe: Related to senses of olfaction and audition and also serves to integrate visual perception with information from other senses. It is important in terms of memory functioning. Damage
may result in aphasia (speech), memory, and language skills.

Parietal Lobe: Located in the middle of the brain, the parietal lobe is associated with processing tactile information. Damage may result in problems with language, spatial orientation, and memory functioning.

Frontal Lobe: Makes up about a third of the cerebral hemispheres. It is associated with reasoning, motor skills (includes the motor cortex), higher level cognition, expressive language.

B. Important Structures of the Brain

Brain Stem: Where information is channeled between the brain and the body. Critical for regulating alertness, arousal, breathing, temperature regulation.

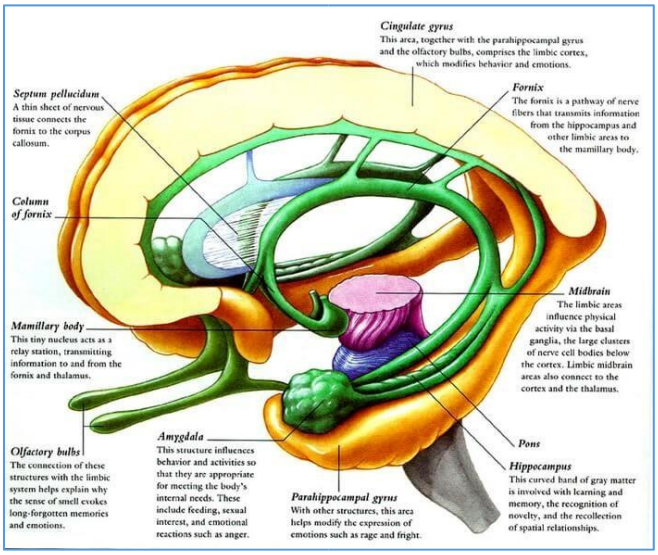
Cerebellum: Large structure at back of brain; skilled motor movements and balance.

Limbic System: Involved in processing emotions and emotion-based behavior and in facilitating learning and memory. Includes the amygdala, which is influence emotional responses (e.g., fear).

Note:

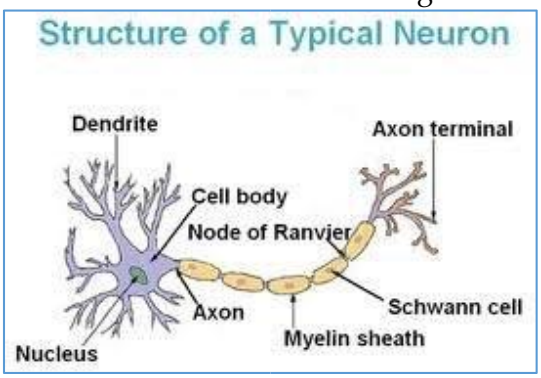
Amygdala: food, sex, and emotion (anger)

Hippocampus: learning and memory; recognition of novelty



C. The Neuron

The human brain contains about 10 billion neurons (nerve cells that transmit information throughout the body). Neurons communicate electrically and chemically through neurotransmitters.



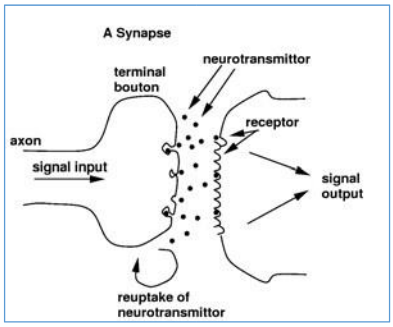
Dendrites: collect information from other neurons

Axon – Elongated fiber that extends from the cell body to the terminal endings; transmits the neural signal.

Axon terminal or terminal buttons – At the end of the neuron and are responsible for sending a signal to other neurons.

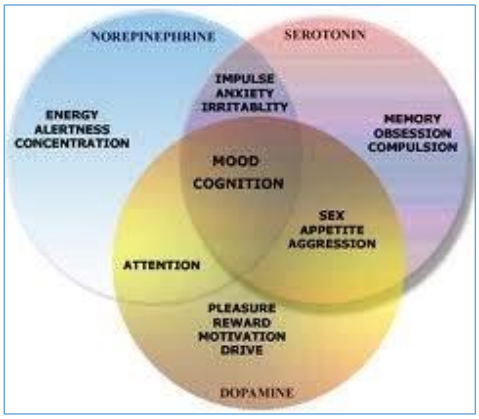
Some axons are covered with myelin sheath, a white fatty substance that insulates the neuron and allows information to be transmitted faster.

The space bewteen two neurons is called a synapse. When the neuron fires, neurotransmitters are released from the first neuron to the next. Neurotransmitters are chemicals which bind to the receptors of the second neuron. Neurotransmitters influence the extent to which a signal from one neuron is passed on the next. For example, the amount of neurotransmitter that is available, the number/arrangement of the receptors, the amount of the neurotransmitter that is reabsorbed.



Neurotransmitters and Their Functions

Neurotransitters are chemicals that transmit signals between neurons.



Norepinephrine: Brings the nervous system in "high alert," by increasing heart rate and blood pressure. NE is also important in the formation of memories. Amphetamines (speed) works by causing the release of NE, as well as domapine and seratonin.

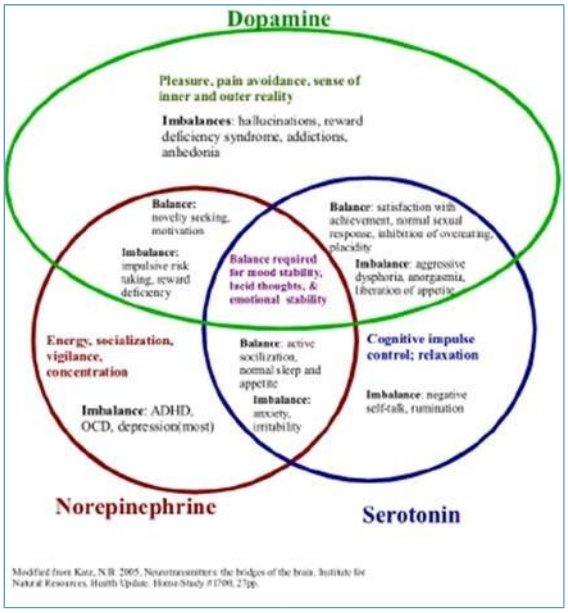
Dopamine (DA): An inhibitory neurotransmitter, meaning when it binds on a receptor site, it blocks the tendency of that neuron to fire. DA is strongly associated with the reward mechanism of the brain ("feels good").
Drugs (cocaine, heroin, alcohol, nicotine) increase dopamine levels in the brain. Mental illnesses, like Schizophrenia, have been shown to involve excessive amounts of DA in the frontal lobes. Parkinson's Disease is associated with too little DA.

Image from www.nursingcrib.com

Serotonin (5-HT): An inhibitory neurotransmitter that is involved in emotion and mood. When low, there is insomnia, anxiety, depression, anger problems, suicide, panic attacks, obesity (increased appetite for starchy foods), chronic pain, and alcohol abuse. When high, there may be hypomania and hallucinations. Medications (prozac) prevent the uptake of 5-HT so there is more of it floating around. Hallucinogens (LSD) work by attaching to 5-HT receptor sites, thereby blocking transmission.

Cindy C. Cottle, Ph.D.
cindycottle@gmail.com
www.mentalhealthandlaw.com

Acetylcholine (ACH): Stimulates muscles and is found in sensory neurons and sleep. There is a link between a loss of ACH in the brains of individuals with Alzheimer's.

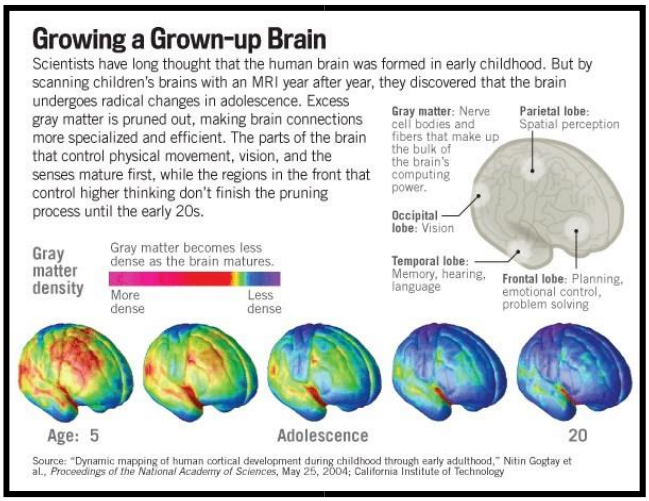


II. Adolescent Brain Development

A. Changes in the Brain During Adolescence

1. Younger children/adolescents are not efficient thinkers – they rely on more parts of the brain in making decisions and performing a task than adults. Those regions relied upon by youth tend to be more subcortical and deeper regions of the brain – those that are more "primitive" and that are developed earlier – rather than the frontal parts of the brain. This can result in less efficient thinking strategies and in relying more on emotions than on reason in making decisions.

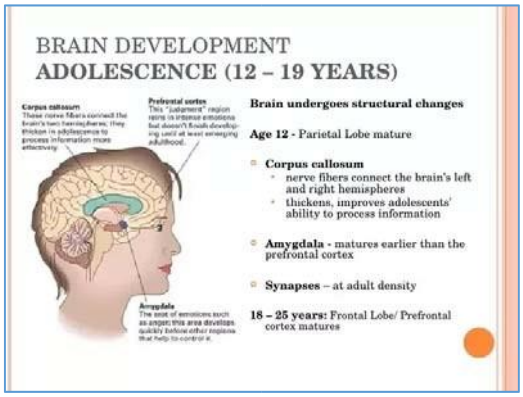
2. Gray matter (nerve cells) becomes less dense as the brain matures. Therefore, during early adolescent years (when there is more gray matter), there is more "hit or miss" or trial-and-error type of thinking. As gray matter is "pruned away," there is more efficient thinking and behaving.



3. White matter (myelin) increases in the brain during development. White matter/myelin is material that allows for speed and more efficient thinking.

4. It is not that certain parts of the brain become functional or activated. Rather, an emergence of functional networks is developed that support more efficient strategies for performing particular tasks. The direction of change is from back to front of the brain.

5. As connections to the frontal lobe develop, thinking becomes more "mature" – that is, based on the reasoning and higher-level thinking skills of the frontal lobe, rather on the less mature and more emotional parts of the brain (those that produce "gut reactions" or impulses).

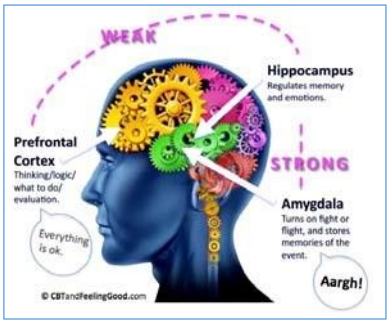


6. Neurotransmitters, or chemicals in the brain that allow for communication among nerve cells, do not reach the most effective levels until adulthood. Varying levels of neurotransmitters can lead to problems with mood, motivation, and sensitivity to rewards or aversive consequences.

B. <u>Practical Implications of Adolescent Brain Development</u>

1. <u>Cognitive Skills</u>: During adolescence and young adulthood, there are progressive improvements in processing speed, memory, planning ability, the ability to think in hypothetical terms, and introspective thought.

2. Emotion: Adolescents rely more on the amygdala, the region of the brain associated with emotion. Therefore, they do not perform well on tasks requiring them to process emotional, stressful, or anxiety provoking stimuli. This may be why some adolescents who seem to exhibit "mature" thinking in some contexts (e.g., those with little stress) do not do so in other contexts (e.g., with peers).



3. Risk taking, Decision Making, and Self Control:

Some degree of involvement in risky behaviors (drinking, use of illegal drugs) has become normative, even across cultures (and species). For some adolescents, risk taking is limited while for other, it persists (see T. Moffitt's, Life Course Limited and Life Course Persistent Antisocial Behavior, 1993). Risk taking allows humans to explore behaviors, privileges, face and conquer challenges, and increase status and peer affiliation.

Why Do Adolescents Engage in Risky Behaviors?

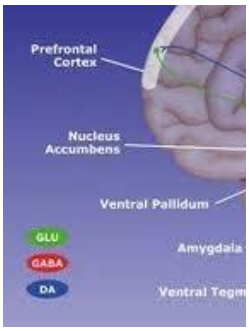
Adolescents do not place the same weight on the rewards and risks of behaviors as adults. Although they are more aware of the costs of risky behavior, they overestimate the reward and underestimate the risk. Also, the consequences of the behavior affect teens differently than do adults: they are less sensitive to negative consequences of drinking (hangovers), for example.

These factors all play a role in *decision making*, which involves the prefontal cortex and more specifically: working memory, response selection, and inhibition of risky choices.

When making decisions about risk, adolescents rely less on the prefrontal cortex, the insula, and the anterior cingulated cortex (ACC). The prefrontal cortex of the brain is associated with inhibition of risky behaviors, as well as the processing of emotions. Since adolescents rely less on this area of the brain, they are more likely to engage in risky behaviors and to fail to consider consequences.

In addition, there is evidence that levels of certain neurotransmitters associated with risk appraisal are not most effective during adolescence. In other words – because of the levels of neurotransmitters in the brain - adolescents have higher sensation-seeking levels (a more activated "reward center" of the brain) than adults and they engage in more risky behaviors than adults. *The Reward Center*

Adolescents' "reward center" of the brain is more active than are adults. There is also evidence that their "avoidance" region (also the amygdala) is less activated so that they are not motivated to avoid negative consequences. In other words, there is a heightened sensitivity to reward and less sensitivity to punishment for adolescents. It is therefore more difficult to motivate teens with threats than with rewards.



When excited, the cerebral cortex signals the ventral tegmental area to release dopamine into the amygdala, the prefrontal cortex and the nucleus accumbens. This is the "reward center" of the brain and serves to increase the individual's attention so that s/he learns to repeat the behavior once more.

Situational Factors Affect Reasoning Ability: Hot Cognitions

Adolescents may think and reason about risky situations similarly to adults under ideal circumstances. However, this may bear little resemblance to the decisions they make in real-world settings, particularly when in stressful or high-arousing situations.

Hot cognitions refer to the idea that a state of emotional excitement may drive behavior more than reasoned thought and logic. In those situations, adolescents may not take into account the costs-benefits of risks when making decisions.

Individuals who are less able to regulate their emotional states or who are more excitable may be particularly prone to exhibit risk-taking behavior in these settings.

4. Social, Emotional, and Other Needs:

During adolescence, there is an increase in time spent with peers (4 times more with peers than with adults), emotional distance from parents and adults, and sexual Interest and behavior.

There are also differences among adolescents in their susceptibility to peer influence. These differences have been found to be associated with *different patterns of neural activation in adolescents when exposed to emotional stimuli.* Youth with higher resistance to peer pressure have greater coordinated activity in brain regions associated with perception and decision-making (Grosbras et al, 2007).

The amygdala is involved in the basic processing of emotional stimuli and social signals of emotions, as well as the planning defense responses (flight/fight). During adolescence and early adulthood, the amygdala increases in volume and the connections between the amygdala and the frontal lobe become more elaborate. Until the brain in mature, the increase in size of the amygdala may be associated with emotionality and aggressive behavior. In addition, adolescents are more prone to read emotions and miss content – because they rely on the amygdala instead of allowing the frontal lobe of the brain to impart reason on the emotional situation.

Finally, adolescents have different levels of certain neurotransmitters, resulting in gender differences in emotion/mood (low serotonin in girls) and risk-taking/aggression (higher dopamine in boys). This also explains different needs of adolescents in terms of sleep (melatonin levels and timing of release of melatonin).

5. The Role of the Environment: Not only does myelin speed axonal conduction, but axonal activity can stimulate the formation of myelin. Since neuronal activity is largely driven by input from the environment, myelination is sensitive to environmental experiences. Enriched environments lead to more myelinated axons and larger corpus collosums among animals. For humans: The corpus collosum is smaller in neglected children. Note: Sleep is a period of memory consolidation and learning.

   - While the brain is most malleable to experience early in life, brain plasticity is retained during adolescence. Thus, adolescence is a period of particular vulnerability and opportunity.

   - The adolescent brain is "built to learn." Like muscles, neurons operate on a "use it or lose it" principle.

   - The adolescent brain is primed to pay attention to things that are new and different.

   - The adolescent brain may provide an enhanced opportunity for the nervous system to recover from drug exposure, brain damage, or other challenges.

Keep in mind, however, some of this research is based on animal studies. And, there is great variability among adolescents and their environments, and these differences (e.g., in temperament, intelligence, activity level) influence the extent to which changes occur.

C. Guiding Concepts in Development (Steinberg & Schwartz, 2000)

- Change does not occur in a linear manner. There are periods of regression and inconsistencies, both between individuals and within a person.

- Keep in mind the influence of poverty, mental illness, instability, abuse, and neglect.

- An individual may be able to apply more mature thinking in one context (e.g., in less stressful situations) but may not be able to apply that same level of thinking in another context (e.g., with peers or when in an emotionally charged situation).

III. Mental Illness, Disability, Substance Use, and Exposure to Trauma

A. General Stress

Adolescents respond to stress differently than do adults. They may be less protected against stress because of the way they respond to the stress hormone THP: instead of a calming effect, the hormone creates additional anxiety.

When faced with a stressor, the amygdala is the first to respond. It releases stress hormones that signal the release of adrenaline (epinephrine), which results in a "fight or flight" stance. Adolescents, whose amygdalas are less under control of their frontal lobes, are prone to respond to situations of stress with more extreme emotion than adults, who can rely on their prefrontal cortex to control their fear and anger.

During adolescence, increases in hormones (including oxytocin, vasopressin, and cortisol – esp for girls) could be related to an increase in the average number of stressors to which adolescents are exposed, the greater reactivity to stressors, and/or to changes in the systems contributing to the release of stress hormones.

Oxytocin is also released (produced by hypothalamus), both in the blood and in a variety of brain regions. Social stressors seem to cause increases in levels of oxytocin, and these increases result in an increased motivation for social contact (DeAngelis, 2008). Oxytocin levels have been found to be lower in individuals with clinical disorders involving deficits in processing of social cues (Autism; Green et al., 2001) and children neglected early in life when interacting with their adoptive mothers than non-neglected children interacting with adoptive mothers (Fries et al, 2005). Some research suggests oxytocin produces a "relaxation response."

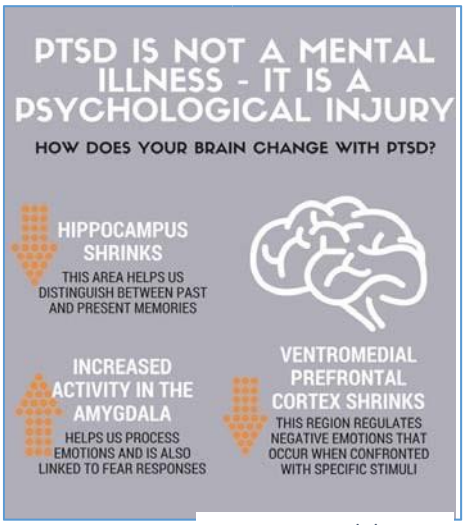
Effect of Stress on Brain Development

Stress causes problems with attention and memory consolidation. The surge of cortisol during a stress response causes the hippocampus to stop functioning normally. In animal studies, there was a decrease in synapses and growth in the frontal lobes and hippocampus, and the amygdala seemed to increase in size. Stress altered the maturation of the brain. In humans, the hippocampus likewise gets smaller, which is not good for memory and learning. The increase in the amygdala may explain the exaggerated responses seen in PTSD.

B. <u>Exposure to Maltreatment/Trauma/PTSD</u>

Adolescents appear more prone than adults to develop PTSD, in part because of the amygdala functioning. Severe and chronic stress, including neglect and abuse, affects brain development (physically), as well as emotional functioning and learning capacity. These early experiences affect the production of stress hormones and often, the development of neural pathways in the brain.

Children and youth who have been exposed to significant trauma, particularly those who have suffered ongoing trauma, may have trouble assessing and interpreting another individual's emotions. They may, for example, misread cues and incorrectly believe that another person is angry or threatening. This, in turn, leads to behavior problems as they attempt to protect themselves from perceived threats.



From: www.ptsduk.org

Adolescents with histories of neglect or abuse tend to have more activity in the amygdala and insula (threat detection and anticipation of pain) areas of the brain. They have also been found to have less gray matter in the prefrontal cortex. This could interfere with motivation, impulse control, emotional regulation, attention, concentration, and learning.

The importance of intervening with adolescents who have histories of trauma is paramount. The brain's plasticity during adolescence means that the effects of trauma on the brain do not have to be permanent. There is also an important need to protect teens from external stressors as much as possible and to actively teach resilience and coping skills.

Trauma/PTSD:

- Creates a filter through which the world is interpreted
- Changes emotional and physical reactivity
- Interactions with law enforcement may lead to misinterpretations

- Discussing history with attorney or others may lead to re-traumatization

Things to Consider:

- The Traumatized Client
- Capacity to Proceed: make sure the symptoms and potential effects are assessed.
- Capacity to Invoke/Waive Miranda Rights: "Totality of the circumstances" and withstanding the pressure of the interrogation, excessive guilt, …
- Other risk of self-incrimination during evaluations or with legal authorities, including in court
- Transfer Cases: Increased vulnerability to trauma and need for specialized treatment.
- Disposition/Miller: Mitigation, treatment needs and amenability
- Re-traumatization during evaluations, meetings and court proceedings
- Caution: relying on symptoms of trauma can highlight other problems, leading to undesired consequences (e.g., transfer to adult system)

C. Mental Illness and Disability

The onset on mental illness oftentimes occurs during adolescence and early adulthood. Many conditions, including depression, anxiety disorders, eating disorders, behavioral disorders (conduct disorder, oppositional disorder) surge in adolescence. Some research suggests that stressful environments and situations may lead to the onset of a mental disorder (stress diathesis model).

Is it mental illness or normal adolescence? Or Drugs?

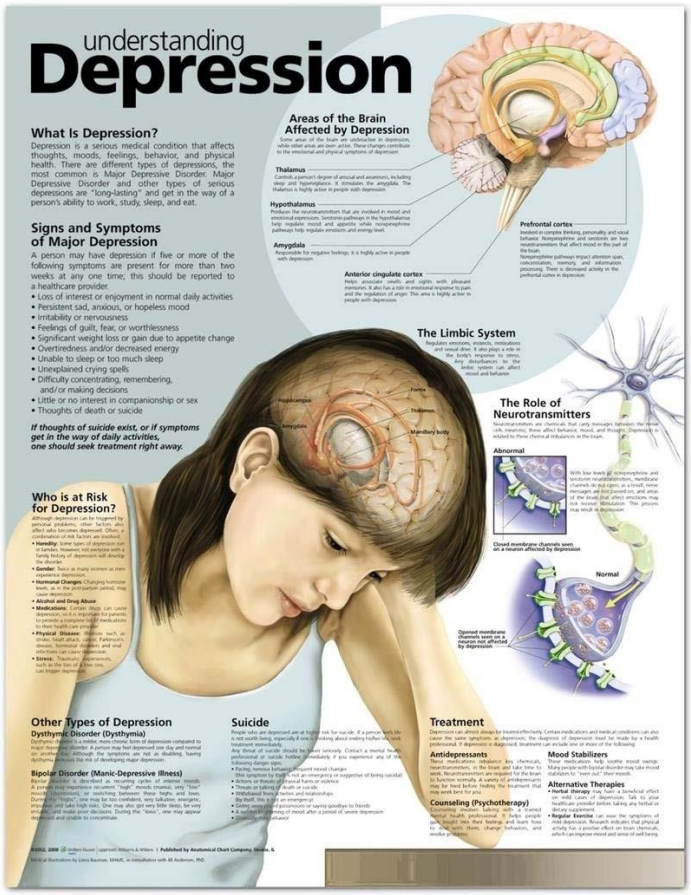
- Severity of mood/behavior change

- Change in functioning

Keep in mind that some conditions look different in adolescents than in adults. The symptoms of depression, for example, are often quite different for adolescents and may include agitation, irritability and aggression rather than isolation and sadness.

Adolescents respond differently to treatment, including medication, then adults. Some medications seem to increase the risk of suicidal thoughts and behaviors in adolescents.

Manic/bipolar disorders are not as common in teens as simple depression. Schizophrenia is even less common than other conditions; however, it is quite possible to see signs/symptoms of an emerging condition ("prodromal phase").



The Adolescent Brain and Mental Illness

Depression: The stress response centers of the brain (hypothalamic-pituitary-adrenal axis) are taxed, and there is a greater than normal release of cortisol in the brain. Also, the left areas of the amygdala are overactive.

Anxiety: Increased activity in the amygdala (esp right), which is associated with detecting emotional stimuli. When the amygdala is overactive, there is even more of a need for the prefrontal cortex reasoning. However, during adolescence there is less myelin and connections allowing the two areas to communicate with one another.

D. <u>Alcohol/Substance Use</u>

Researchers are now beginning to look at substance use as a form of learning, in terms of the way the brain changes in response to substance use. Repeated substance use reshapes learning pathways in the brain. Factors contributing to increased propensity of adolescents to use alcohol and other drugs:

- These are risk-taking activities. Thus, they may reflect the same immature capacities for self-control as other risky behaviors.

- Oftentimes, the use of alcohol/substances occurs socially, with adolescents being particularly susceptible to peer influence (either directly or indirectly).

- In the brain, alcohol and drugs interact with the same reward circuitry as other rewards (the dopamine system). Thus, adolescents are more rewarded by (and motivated for) the use of alcohol and drugs (animal studies).

  - Adolescents have a reduced sensitivity to aversive consequences that normally serve to moderate use of alcohol/drugs.

Alcohol and the Adolescent Brain:

Adolescents, compared to adults, are better at handling the sedative aspects of drinking (drowsiness, hangovers, lack of coordination). The neurotransmitter GABA is enhanced by alcohol. Adolescents have fewer GABA receptors – so they experience fewer inhibitory effects that GABA allows. Less inhibitions means less sedation, less impairment of motor skills and fewer coordination problems. It also means greater tolerance – and therefore – a greater incentive to keep drinking.

In terms of development, alcohol has been shown to affect the size and efficiency of the prefrontal cortex and the hippocampus, which is important for learning and memory. Alcohol also affects white matter. Among teens with alcohol-use disorders, white matter of the corpus callosum becomes damaged, especially in an area called the splenium, which is the part of the brain associated with hearing, vision, motor control and sleep-wake cycles. Alcohol use may also inhibit adolescents' abilities to consider multiple sources of information when making a decision – forcing them to use fewer strategies when learning new information.

Substance Use: Adolescents process other drugs (cocaine) differently from adults. Cocaine stimulates dopamine, and teens appear sensitive to the effects of cocaine, especially in the reward centers and the habit forming areas of the brain. OxyContin likewise affects the reward system and can result in permanent changes to that system. OxyContin tricks the brain into keeping more dopamine receptors than needed.

IV. Use of Adolescent Brain Development Concepts in Court

Capacity to Waive/Invoke Miranda Rights (NCGS 7B-2101: Interrogation Procedures)
Developmental factors to consider in capacity to waive Miranda Rights:

- Mental status of juvenile (IQ, age, time of day, level of stress in environment, number of adults present, emotional arousal and decision making)
- Beliefs the juvenile may have about peers – do they worry about "ratting them out" or are they taking the blame for another peer

- Was their thinking characteristic of only considering "short-term" consequences (i.e., stopping the questioning?)

Transfer to Adult Court: NCGS 7B-2203 considers factors relevant at a transfer hearing, including the following: age, maturity, intellectual functioning, prior record, and prior attempts to rehabilitate the juvenile. Consider:

- Decision making during alleged offense
- Susceptibility to peers, emotional arousal and interpretation
- Level of planning versus impulsivity
- Treatment needs and amenability: some argue that adolescents are more amenable to treatment due to the malleability and continued development of the brain.

Capacity to Proceed to Trial: Consider the ability of the juvenile to weigh risks/ benefits in making decisions (e.g., how to plead), to think in hypothetical situations (e.g., deciding if to accept a plea agreement); and to delay gratification (e.g., plead guilty versus wait in detention for trial).

Diminished Capacity/Mental State at Time of Offense: In addition to factors considered in preceding sections (see, e.g., Transfer), consider the juvenile's emerging mental health functioning and increased susceptibility to alcohol/substance abuse and mental illness. Consider the possibility of misdiagnosis; effectiveness of treatment; and consistency of treatment.

Disposition/Sentencing/"Miller": Relevant to psychological evaluations is 15A-1477c: Penalty Determination: "The defendant or the defendant's counsel may submit mitigating circumstances to the court, including, but not limited to, the following factors: Age at the time of the offense; Immaturity; Ability to appreciate the risks and consequences of the conduct; Intellectual capacity; Prior record; Mental health; Familial or peer pressure exerted upon the defendant; Likelihood that the defendant would benefit from rehabilitation in confinement; and Any other mitigating factor or circumstance.

Many of these factors relate to the maturity of the adolescent – decision making capacities, impulsivity, emotional functioning, social functioning – all factors that are in flux during adolescence due, in part, to brain development.

Forensic Evaluations in Delinquency Matters

Legal Issue	Indicators for an Evaluation	Referral Questions	Special Issues/Potential Dilemmas
Capacity to Proceed NCGS §15A1001-1008	History of Intellectual Disability, learning problems, failure in school Acquiescing to others/ "parroting back" information Neurological impairment	"Evaluate juvenile to determine if s/he has a mental health diagnosis or intellectual disability that impairs his/her capacity to proceed to trial or to enter into a plea agreement"	Confidentiality regarding statements about alleged offense (recommend the evaluator not question about the juvenile's version of events)
Capacity to Waive Miranda Rights NCGS §7B-2101 *In re JDB v NC 131 S. Ct. 2394 (2011)* *In re KDL, 207 NC App. 453, 459 (2010)*	Age/experience with legal system Intellectual/learning problems Evidence of impairment at the time (intoxication, extreme fear) Multiple or conflicting statements	"Evaluate the juvenile to determine his/her capacities to waive Miranda rights in the context of a police interrogation." "Evaluate the juvenile to determine the juvenile's capacities to waive Miranda rights and the risk of being coerced into making a statement" "To determine if there were any coercive factors associated with the conditions of the interrogation that – when combined with the juvenile's risk of being coerced – would have made the waiver involuntary"	Involves assessing a past mental state and requires much collateral data Timing: how much time has occurred since the statement is highly relevant since the capacities of adolescents will change over time more than for adults Adolescents' decision making is not as sophisticated as adults (e.g., short-term thinking, impulsivity, failure to weigh risks). Adolescents may be more influenced by circumstances of questioning and feel more pressure than an adult JDB v NC (2011) Evaluators need to determine when the client was *in custody* vs when perceived s/he was in custody

Cindy C. Cottle, Ph.D.
cindycottle@gmail.com
www.mentalhealthandlaw.com

Legal Issue	**Indicators for Evaluation**	**Referral Question**	**Special Issues/Potential Dilemmas**
Juvenile Transfer (Waiver) NCGS §7B-2203	Age/experience with legal system Mental health and/or trauma history Immaturity ("follower") Behavior marked by impulsivity, poor decision making	"Evaluate the juvenile with respect to those factors of 7B-2203 that may be addressed by mental health assessment…" Eval. juvenile's intellectual functioning, mental health status, …maturity, treatment needs and amenability	Assessment of "risk of harm" and the problem of the alleged offense Right to avoid self-incrimination Opinions about "risk" should be *estimates* & be specific to type and timeframe What is maturity? Sophistication?
"Mental State at the time of Offense " or Culpability	Age/exper/IQ, mental health, IEP/BIP Autism Spectrum Disorder Behavior of alleged offense deviates from prior behavior Trauma history/exposure	""What was the juvenile's level of functioning /mental capacities at the time of the alleged offenses?" "What situational factors may have been present at the time of the alleged offense? What effect would they have on decision making and behavior, given his/her level of functioning at the time?"	Involves assessment of prior mental state. Therefore, the time between alleged offense and evaluation is relevant to memory functioning, cognitive development and maturity over time

Disposition NCGS § 15A-1477c "Miller" Resentencing	As above, as well as history of treatment successes/failures in past Changes in support system or other environmental factors Consideration of how to manage risk	To obtain clarification as to what has and hasn't worked. To determine who should be involved in treatment and how To establish a plan for treatment that includes transitioning to community	Risk Estimates, not predictions; Consider "risk management" versus "risk of harm" Aggression is multifaceted: people may be at higher risk in some situations than in others Adolescence is change: limits the degree to which we can predict behaviors. Confidentiality: Revealing undetected behavior.

Cindy C. Cottle, Ph.D.
cindycottle@gmail.com
www.mentalhealthandlaw.com

V. Cautions and Limitations

A. Timing: Retrospective evaluations, when to call the evaluator

B. Limitations of Neuropsychological Research and Assessment Techniques

o Animal vs human research o Applying research about groups to an individual case o Overreliance on neuropsychological research o Explanation, not an excuse

C. Common Challenges Associated with the Use of Forensic Evaluations

References and Resources

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Cindy C. Cottle, Ph.D.
cindycottle@gmail.com
www.mentalhealthandlaw.com

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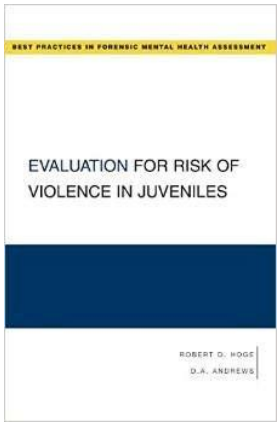
Recommended Books



Best Practices in Mental Health Assessment Series; Editors: Thomas Grisso, Alan Goldstein, and Kirk Heilbrun; Oxford University Press

Relatively concise (150-200 pp) but thorough books on specific topics related to mental health law. Each title covers a given area (e.g., Evaluation of Risk of Violence in Juveniles) and is written by the professionals who are considered to have substantial clinical and research expertise in that area. Each book in the series follows a basic format of providing a foundation of relevant forensic mental health concepts, a summary of research in the area, how/what comprises a forensic evaluation of the issues, a review of specialized tests/instruments, and an overview of case law and statutes.

On the Web:

The MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice
http://www.adjj.org/content/index.php

Ethical Standards, Principles, and Guidelines

Ethical Principles of Psychologists and Code of Conduct with 2010 Amendments
http://www.apa.org/ethics/code/index.aspx

Specialty Guidelines for Forensic Psychologists, APA (2013)
http://www.apa.org/practice/guidelines/forensic-psychology.pdf

Ethical Guidelines for the Practice of Forensic Psychiatry
http://www.aapl.org/ethics.htm

National Organization of Forensic Social Work
http://nofsw.org/?s=ethics

Cindy C. Cottle, Ph.D.
cindycottle@gmail.com
www.mentalhealthandlaw.com