1. Discuss the relationship between emotional disorders and poor self-regulation skills, bullying behavior, and limited academic success in school.

2. Discuss the neural architecture of emotional functioning by identifying six core brain regions involved in the self-regulation of emotion.

3. Explore the neurobiological correlates and treatment options for psychopathy and emotional dysregulation, depression, and anxiety disorders in children.

4. Present a treatment algorithm utilizing multiple intervention methods designed to de-escalate behavior and promote social-emotional learning.
Children with emotional disturbances remain the single most challenging special education population to educate successfully. WHY?

Children with emotional disturbances are twice as likely to drop out of school and tend to earn worst grades than children with other disabilities (Reddy, 2001).

Approximately 1/3rd of ED children receive homebound instruction - more than any other disability group.

Poverty and family stressors key environmental predictors. Currently 1/3rd of all ED children come from households with an annual income of less than $12,000 per year.

African Americans represent better than 1/4th of all children labeled emotionally disturbed.

Approximately half of ED children reside with just one parent.

Disproportionate rate of physical abuse in children with emotional disturbances – more than any other disability group (Reddy, 2001).

78% of schools experience one or more violent crimes.

Middle schools report highest rates of violent crimes.

Percentage of kids experiencing violent crimes in 2006-2007 is not much different than 1999, despite curricular changes emphasizing character education.

A strong relationship exists between committing violent acts and social-emotional disorders in children (Valliant et al., 1999; Worling, 2001)

A strong relationship also exists between ED and bullying.
Bullying is defined by acts of intentional harm over time to exert power and control over another (Pepler & Craig, 2000).

A strong relationship also exists between ED and bullying. For instance, victims of bullying are often unpopular, socially isolated, and report low self-esteem (Hawker & Boulton, 2000).

Children with disabilities in regular classroom settings are most vulnerable to being bullied (Mishna, 2003). In fact, kids who are obese, gay, or have disabilities are up to 63% more likely to be bullied than other children.

Children who engage in bullying behavior tend to be impulsive, dominant in relationships, and view violence as a positive means for resolving conflict (Carran & Kellner, 2008).

In summary: Children with emotional disturbances are most likely to be involved in bullying/victim relationships (Carran & Kellner, 2008).

<table>
<thead>
<tr>
<th>Type of Bullying</th>
<th>Number of Students</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bullied</td>
<td>8,166,000</td>
<td>31.7%</td>
</tr>
<tr>
<td>Made fun of, insults</td>
<td>5,390,000</td>
<td>21.0%</td>
</tr>
<tr>
<td>Subject of rumors</td>
<td>4,836,000</td>
<td>19.1%</td>
</tr>
<tr>
<td>Pushed, shoved, spit</td>
<td>2,819,000</td>
<td>11.0%</td>
</tr>
<tr>
<td>Destruction of property</td>
<td>1,076,000</td>
<td>4.2%</td>
</tr>
<tr>
<td>Cyber-bullied</td>
<td>940,000</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

**ADDITIONAL FREQUENCY DATA:**
- Males ..........30.3%
- Females ......33.2%
- Grade 6 .......42.7%
- Grade 12 ......23.0%
- Whites ..........34.1%
- Income ..........$7500 - $14,999

* Boys tend to be more aggressive, girls use more social isolation

### Whole School Approach
Most literature on bullying prevention suggests the following guidelines:
1. Strong student-teacher bonding.
2. Consistent behavioral norms.
3. Adult involvement in child’s education.
4. Effective supervision.
5. Coordinated bullying prevention groups run by school counselors.
6. Increased student involvement in assisting administrators to establish a zero tolerance policy.

**Other Resources:**
- Olweus Bully Prevention Program
- RCCP (Resolving Conflict Creatively Program)
- Bully-Proofing Your Middle School (Sopris West)
The rate of diagnosing pediatric bipolar disorder in outpatient clinical settings has doubled in the past five years (Leibenluft & Rich, 2008), though ED in schools remains proportionally the same the last 30 years.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>LD</td>
<td>3.6</td>
<td>5.2</td>
<td>6.0</td>
<td>5.6</td>
</tr>
<tr>
<td>Speech</td>
<td>2.9</td>
<td>2.4</td>
<td>2.3</td>
<td>3.0</td>
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<tr>
<td>MR</td>
<td>2.0</td>
<td>1.3</td>
<td>1.3</td>
<td>1.1</td>
</tr>
<tr>
<td>OHI</td>
<td>.2</td>
<td>.1</td>
<td>.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Autism</td>
<td>--</td>
<td>--</td>
<td>.2</td>
<td>.5</td>
</tr>
<tr>
<td>*ED</td>
<td>.6</td>
<td>.9</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>(ALL)</td>
<td>10.1</td>
<td>11.4</td>
<td>13.3</td>
<td>13.6</td>
</tr>
</tbody>
</table>

*Source: National Center for Educational Statistics (2007)*

The ED Paradox for Schools

3 Explanations for the ED Paradox:

1) Other-Health Impaired coding used as an umbrella term to capture any child on medication.

2) School IEP teams comprised mainly of non-mental health professionals determining mental health code.

*In addition, school teams tend to over-rely on behavioral checklists....letting forms over-rule clinical judgment.

3) Federal definition of ED rather vague with few parameters given (i.e. inappropriate feelings under normal circumstances??)

**Universal codes lead to universal treatments**
Meta-analysis demonstrated behavior modification one of the most effective intervention strategies for managing classroom behavior (Lloyd, Forness, & Kavale, 1998).

- Dismisses observable behavior as being reflective of brain functioning. No need for introspection, or analysis of feelings, thoughts and moods.
- Goal is to induce task specific performance, as opposed to the internalization of self-regulatory behaviors (Cicerone, 2002).
- Does changing behavior change emotions??

Neuropsychology is the study of brain-behavioral relationships with respect to learning and behavior. It presumes that a child’s ability to adapt to the social demands of their environment begins with the functional organization of the brain.

- Observable behavior is a striving for homeostasis and balance occurring in the brain.
- Therefore, treatment for behavioral and emotional disorders should focus upon both intrinsic and extrinsic factors, rather than simply exploring rational functions of behavior (i.e. BIP’s assume child is trying to escape, seek attention, control, etc.).
Children with emotional disturbances tend to be unsuccessful in school due in part to a lack of self-regulation skills in one or more of the following domains:

a) **Behavioral Self-Regulation** - poor inhibition of impulses and motor control.
b) **Emotional Self-Regulation** - and inability to self-regulate moods and reactions to social situations.
c) **Attention Self-Regulation** - an inability to modulate and sustain attention.

* A neuropsychological approach does not try to put semantic labels on observable behavior, but instead tries to identify core brain regions responsible for the dysfunction.

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**The Cerebral Orchestra of Emotions: Subcortical Regions**

   - A hyperactive amygdala source of most anxiety problems.
   - Kids with anxiety issues need structure in their day to reduce chances for unexpected and unfamiliar events.
   - **Serotonin** can help calm down amygdala, like a warm blanket over brain. It acts on 18 receptors throughout the brain, a key transmitter that converts short-term to long-term memory (Kandel, 2006).
(2) Hippocampus - located in medial temporal lobe and responsible for facilitating memory functioning. This structure also involved with emotional learning.
- Emotional learning (classical conditioning) can take place outside of conscious control with paired association between amygdala and hippocampus ……a phobia!!
- Chronic stress from abuse or neglect releases cortisol which reduces hippocampal volume and leads to memory loss and clouded thinking.
- A hypervigilant hippocampus develops from chronic stress thereby priming the system to over-react to benign situations (PTSD).

(3) Nucleus Accumbens - located in forebrain and part of basal ganglia.
- Reward center of brain which is activated in anticipation of reward.
- Most recreational drugs including cocaine and amphetamines increase dopamine in this area.
- Involved in task motivation and rewards.
- Under-activity of reward center of our brain associated with anhedonia and depression.
(1) Orbitofrontal cortex - region of the brain responsible for ascribing an emotional valence or value judgment to another’s feelings. Often triggers an automatic social skills response (Rolls, 2004).
- Has rich interconnections with the limbic system.
- Responsible for emotional executive functioning.
- Self-regulation of behavior as highest levels of emotional decision making dictated by this brain region.
(2) Ventrolateral prefrontal cortex - responsible for response inhibition and emotional regulation.
- Has rich interconnections with the limbic system.
- Also involved with emotional executive functioning.
- Situated adjacent to orbitofrontal cortex and involved in the ability to take another’s perspective on an emotional event (theory of mind).

(3) Anterior Cingulate Cortex - task motivation and reward based decision making. Severe damage leads to akinetic mutism.
- Selective attention allows us to shift our focus from the outside world of objects and events toward the inside world of thoughts and ideas (self awareness).
- Helps provide constraint over behavior.
- The brain’s gear shifter between cognition and emotion. When stuck, can result in obsessive and ritualistic types of behaviors, as well as cognitive inflexibility (Swingle, 2007).
- Key brain region in developing “theory of mind”.

The Cerebral Orchestra of Emotions: Cortical Regions
Brianna is celebrating her 5th birthday and is brimming with excitement now that the time has come to open gifts (nucleus accumbens). Her first gift is from Megan, her best friend, and is a Cinderella dress, slippers, and crown. She responds with intense excitement (amygdala/orbitofrontal cortex).

Brianna races to Megan and impulsively gives her a huge hug (ventrolateral prefrontal cortex). After opening the rest of the presents, Brianna realizes that Megan’s birthday is next week and wonders how Megan would feel if she bought her the new Disney Leapster (anterior cingulate cortex).

http://www.ted.com/talks/aditi_shankardass_a_second_opinion_on_learning_disorders.html