Building Individual and Team Resilience: A Neuropsychiatric and Social Perspective

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Disclosures

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Learning Objectives

- Identify the biologic components of the neuroplastic process
- Recognize the attributes that can contribute to increased resilience
- Recall strategies that can contribute to increased personal resilience
- Describe some of the adverse workplace challenges that can negatively impact the development of professional resilience in the mental health clinician

Resilience is the process and outcome of successfully adapting to difficult or challenging life experiences. A number of factors contribute to how well people adapt to adversities, including:

- The ways in which individuals view and engage with the world
- The availability and quality of social resources
- Specific coping strategies

According to Richard Davidson, being resilient doesn't mean that you don't experience hard times. The road to resilience most often involves considerable emotional distress.

Resilience is not a trait that you either have or don't have. It includes behaviors, thoughts, and actions that can be learned and developed. When you break it down to the physical level in your brain, resilience is a neuroplastic process.

Review of neurological anatomy and physiology involved in resilience

The neurological anatomy involved in the brain's development of resilience includes the prefrontal cortex and the amygdala.

The physiology of this neuroplastic process is that signals from the prefrontal cortex to the amygdala, and from the amygdala to the prefrontal cortex, determine how quickly the brain will recover from an upsetting experience.

The more white matter (axons connecting neurons) lying between the prefrontal cortex and the amygdala, the more resilient one becomes. Every brain is capable of increasing the connections between brain regions. This concept is based on the neuroplastic process model.

Resilience can be learned!

Development of Personal Resilience

The development of personal resilience can be defined as the ability and process by which the mental health professional can quickly recover from the negative experiences in the healthcare setting.

There are key attributes that contribute to the improved neuronal connections in the neuroplastic process and help to develop resilience. These include:

- Optimism
- Patience
- Mindfulness
- Supportive Relationships
- Available resources
- Work-Life boundary setting
- Self-Development
- Growth that leads to positive expectations for the future

The Development of Professional Team Resilience

The development of professional team resilience can be defined as the ability and process by which the mental health professional can use personal resources to increase external supportive relationships to meet stressful workload demands and quickly recover from the negative experiences in the healthcare setting.

There are 3 sources of challenges to the development of professional resilience for mental health professionals. These include:

- Challenges from difficult clinical issues or conflict with challenging patients
- Challenges may be conferred by organizational issues unique to the specific workplace (ie: in-house communications, administration systems, or inter-professional relationships)
- External organizational pressures may be increasing scrutiny of practices and individuals. (ie: State and Federal regulations)

Naming and Defining the Basal Motor Nuclei

Neuroanatomists originally grouped three masses of deep nuclei; the corpus striatum, claustrum, and amygdala – as the basal ganglia, before knowing their ontogeny, connections, and functions.

Now neuroanatomists assign the amygdala of the original basal ganglia to the limbic system.

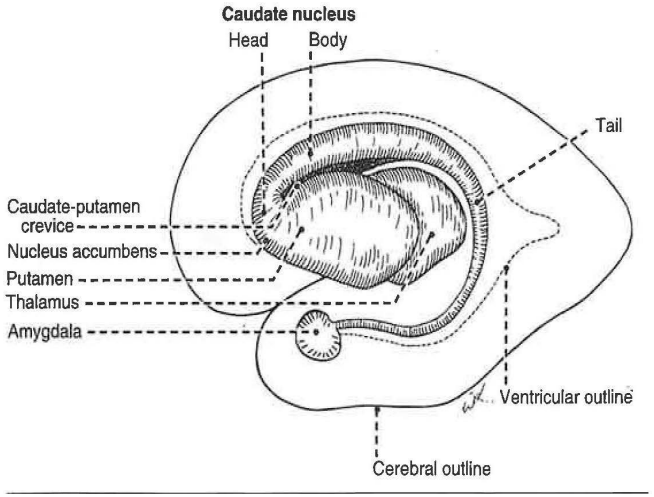


FIGURE 11-3. Phantom drawing of the caudate nucleus in situ.

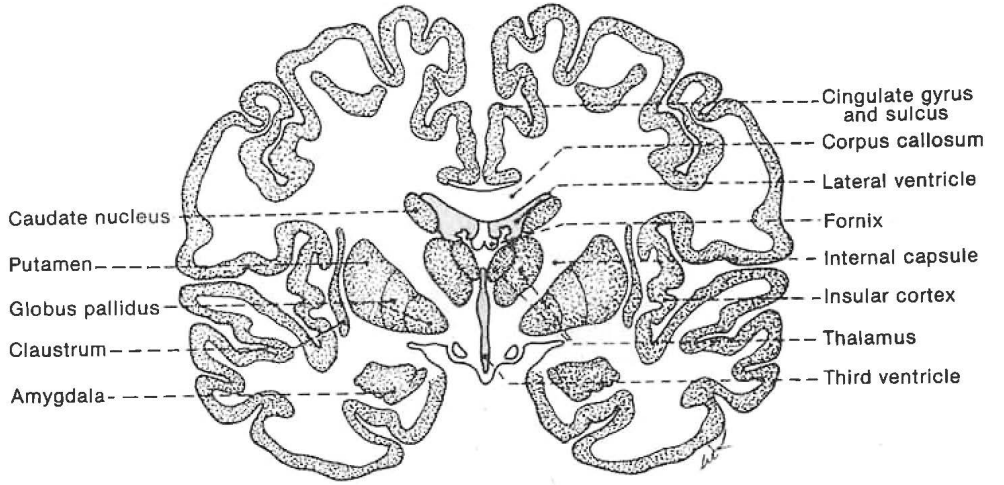


FIGURE 11-1. Coronal section of the cerebral hemispheres through the level of the basal ganglia.

The Amygdala and Its Connection

The amygdala is a large nuclear mass located in the temporal pole, at its transition to the posterior inferior surface of the frontal lobe. It is continuous with the uncus of the parahippocampal gyrus. Formerly classed with the basal ganglia, it is now assigned to the limbic lobe.

Connections

- Anterior olfactory lobe
- Pyriform, temporal, and prefrontal cortex
- Hypothalamus
- Nucleus medialis dorsalis of the thalamus
- Brain stem tegmentum, including taste afferents via the parabrachial nucleus

The Amygdala and Its Connection: Continued

- Hypothalamus, septal region, thalamus, and hippocampal formation via the ventral amygdalofugal pathway & Ansa peduncularis of the inferior thalamic peduncle
- Opposite amygdala via the stria terminalis & anterior commissure
- Limbic and nonlimbic cortex of all lobes
- Brain stem tegmentum

Functions: Like many brain centers, the amygdala augments, modulates, or integrates several functions, rather than being a single center with a single function. It seems to integrate input from sensory, cognitive, and limbic pathways, leading to appropriate visceromotor and somatomotor behavioral patterns.

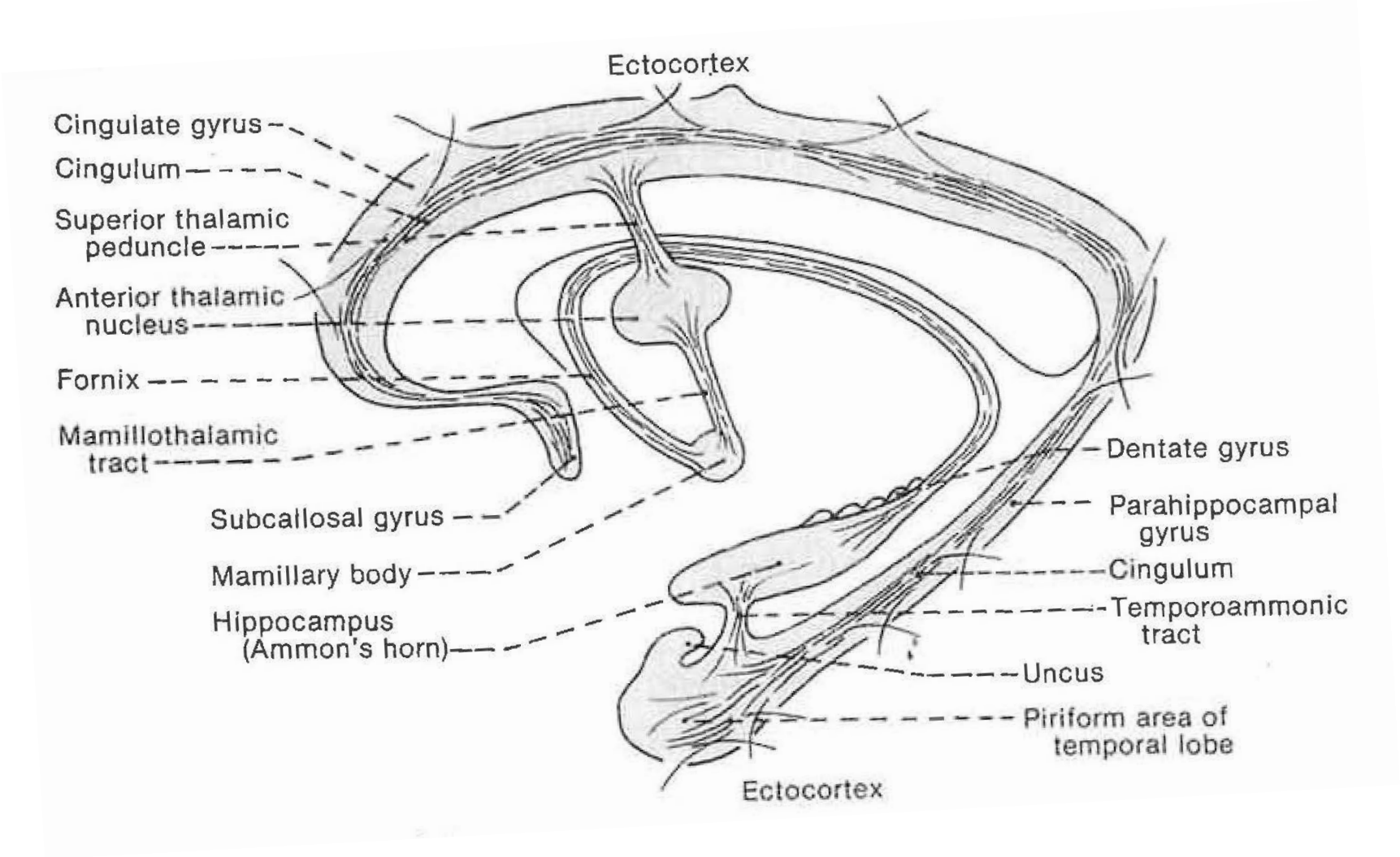
Destruction of the amygdala may result in passive, defensive, or aggressive behavior.

The Limbic Lobe and Its Connection

In 1937 James Papez suggested that certain rhinencephalic and limbic pathways provided the anatomical basis for emotions and their expression through visceral and instinctual actions such as those involved in feeding, mating, mothering, and aggression. The Papez circuit, like the basal motor nuclei, consists of feed-in/feed-out pathways between cortical and subcortical centers, with a major connecting bundle in the cerebral white matter, the cingulum.

- **Functions of the Limbic Lobe**
- **Visceral/autonomic responses**
- **Complex behavioral responses**
- **Reward behavior and pleasurable sensation**

  Paul Yakovlev suggested that the posterior cingulate gyrus contained a cenesthetic center, a “feeling good” center, which might control moods of elation, but the amygdala and other limbic connections also participate.


Ectocortex
Cingulate gyrus
Cingulum
Superior thalamic peduncle
Anterior thalamic nucleus
Fornix
Mamillothalamic tract
Subcallosal gyrus
Mamillary body
Hippocampus (Ammon's horn)
Dentate gyrus
Parahippocampal gyrus
Cingulum
Temporoammonic tract
Uncus
Piriform area of temporal lobe
Ectocortex