



# ADOLESCENCE AND THE ADOLESCENT BRAIN

 A distinct stage of brain development, beginning at puberty and extending into the mid-twenties)

MOST STUDIES BREAK THIS DOWN INTO 2 AGE GROUPS:

- "Adolescent" = 12-17
- "Young Adult" = 18-25

## **SPECIAL FEATURES OF THE ADOLESCENT BRAIN**

Neural pathways are malleable (easily influenced and shaped).

# There is a greater preference for immediate reward.

#### Passion and creativity run high.

Abstract thinking (the ability to conceive of, understand, and tolerate multiple POV) is only starting to develop. The adolescent brain tracks emotional stimuli even when told to focus on non-emotional stimuli.

Concrete thinking (one POV, one "right" way) is very much running the show.

Blakemore, S (2020) Inventing Ourselves, The Secret Life of the Teenage Brain

# SOCIAL RELATIONSHIPS TAKE HIGH PRIORITY.

Decision-making is largely driven by the need for peer acceptance and the desire to avoid being socially excluded. In an adolescent's imagination, they are constantly being observed and evaluated by others (the "imagined audience" effect). These imagined judgements and comparisons are both exaggerated and pervasive.

Social tasks often interfere with other tasks assigned at the same time.

# SOCIAL RISK TRUMPS ALL OTHER RISK AND A NEGATIVE FEEDACK LOOP DOMINATES.

### There is a constant balancing act between:



# *Risk taking* in order to be accepted ...

*Risk aversion* in order to avoid being embarrassed, perceived as too clever, etc.

# THE PHYSIOLOGICAL EFFECTS OF THIS RISK ARE MORE PRONOUNCED IN ADOLESCENTS THAN IN ANY OTHER AGE GROUP.

Participants of varying ages were placed in a brain scanner and told that a flashing red light indicated they are being observed by a peer. All they had to do was think about their face being observed by someone they couldn't see.

Adolescents had higher:

→Self-reported levels of embarrassment.

→Levels of stress and arousal indicated by the amount of sweat produced by the skin (skin conductance).

→Greater activity in the medial pre-frontal cortex (the key region of the "social brain" involved in reflecting on the self).

# "EXPERIENCE-DEPENDENT" DEVELOPMENTAL MILESTONES FOR THIS PERIOD

## SELF REGULATION

The ability to notice disturbances and take action to disrupt them, stabilize, and restore balance.

# Interactive: with the assistance of another.

#### Internal: through my own feedback loop.

## DIFFERENTIATION

The ability to distinguish between thoughts, sensations, and actions. Internal: Distinguishing between my thoughts, sensations, and actions.

Inter-relational: Distinguishing between my thoughts, sensations, and actions and another's and being OK when they are different.

Interrupted and/or adverse experience can impede, or create gaps in, this development.

# **REWIND TO 2020 ...**

Where were your students developmentally?

What was interrupted?

What happened to their lives?



What was their "re-entry" like? 2020 REPORT NATIONAL ALLIANCE ON MENTAL ILLNESS (NAMI)

#### **ADOLESCENTS AGED 12-17:**

- 1 in 6 experienced a major depressive episode (MDE).
- 3 million had serious thoughts of suicide.
- 31% increase in mental health-related ER visits.
- 18% reported that the pandemic had a significant negative impact on their mental health.
- 50% with pre-existing mental health concerns reported a significant negative impact from the pandemic.
- Among alcohol/drug users, 15% reported increased use.

# YOUNG ADULTS AGED 18-25:

- 1 in 3 experienced a mental illness.
- 1 in 10 experienced a serious mental illness.
- 3.8 million had serious thoughts of suicide.
- 23% reported that the pandemic had a significant negative impact on their mental health.
- 50% with pre-existing mental health concerns reported a significant negative impact from the pandemic.
- Among alcohol/drug users, 18% reported increased use.

2021 REPORT SUBSTANCE ABUSE & MENTAL HEALTH SERVICES ADMINISTRATION (SAMHSA)

### **ADOLESCENTS AGED 12-17:**

- An estimated 49.5% had experienced a mental disorder.
- Of these, an estimated 22.2% had severe impairment and/or distress.

#### YOUNG ADULTS AGED 18-25:

- 44.6% experienced a mental disorder in 2021.
- Among adults over 18, this group had the highest prevalence of severe mental illness (11.4%) compared to 26-49 years (7.1%) and 50+ (2.5%).

CONSTANTLY MONITOR FOR DANGER/ HYPER-VIGILANCE FIGHT

# ALARM

A short-term SNS response to REAL or PERCEIVED threat. Intended to last a few minutes to a few hours.

COLLAPSE AND SUBMIT

FREEZE

FLIGHT

CONNECT/ ATTACH/ CLING/ CRY FOR HELP

STRATEGY	PRIMITIVE, UNCONSCIOUS, SURVIVAL COPING	SOPHISTICATED, CONSCIOUS, ADAPTIVE COPING
FIGHT	Kill or be killed.	Fix it!
FLIGHT	Run from everything.	Know when to back off, take a break or leave.
FREEZE	Unable to move.	Wait, watch, listen.
CONNECT/ATTACH/CLING/ CRY FOR HELP	Cling until both parties drown.	Talk it out with a friend.
COLLAPSE AND SUBMIT	Give up, stop caring, withdraw all energy.	Let go of resistance, cooperate.
CONSTANTLY MONITOR FOR DANGER/ HYPERVIGILANCE	Treat everything as life-threatening and expect the worst.	Pay attention to the actual conditions and adapt!

#### **STRESS**

"The nonspecific response of the body to any demand, whether it is caused by, or results in, pleasant or unpleasant conditions."<sup>1</sup>

## TRAUMA

When external threat exceeds internal and external resources.

"An incomplete biological response to threat, frozen in time."<sup>2</sup>

<sup>1</sup>Selye, H. (1984) <u>The Stress of Life.</u>

<sup>2</sup>Levine, P. (1998) <u>Memory, Trauma and Healing</u>

Undischarged energy and unprocessed information is trapped in a state of suspended animation in the nervous system, the senses, and the IMPLICIT MEMORY SYSTEM.

Over-stressed or traumatized systems lack what is required to turn the off the alarm. Traumatized nervous systems respond to stress differently from non-traumatized nervous systems.

Implicit memories have no sense of beginning or ending. All that exists is NOW (always has been, always will be).

Implicit memories are activated by sensory association and generalization usually outside of conscious awareness and control.

## THE CONTINUUM OF AROUSAL AND REACTION

#### NON-TRAUMATIZED NERVOUS SYSTEMS:



#### TRAUMATIZED NERVOUS SYSTEMS:



### THE AMERICAN COLLEGE HEALTH ASSOCIATION (ACHA) 2023 NATIONAL SURVEY OF OVER 55,000 UNDERGRADUATE STUDENTS

76% were in moderate to serious psychological distress. 79% reported moderate or high stress levels within the last 30 days.

53% met the criteria for loneliness.

31% met the criteria for suicidal ideation.

3% reported attempting suicide in the past year. 13% had intentionally injured themselves within the year.

36% had been diagnosed with anxiety.

28% had been diagnosed with depression.

8% had been diagnosed with a trauma or stressor-related disorder, such as PTSD.

Other mental health conditions included eating disorders, obsessive-compulsive disorders, bipolar disorders, and substance use disorders.

# College students are affected by other stressors:

microaggressions 19% sexual harassment 12% discrimination 12% bullying 10%



Trans/gender-nonconforming and LGBTQ+ students report higher levels of stressors and distress than their cis and straight peers:

> microaggressions 46% sexual harassment 21% discrimination 28%

30% had thought about suicide in the previous year.

<b>2022</b> BEST COLLEGES SURVEY	Students identifying as straight reporting experiencing in the previous 12 months	LGBTQ+ students reporting experiencing in the previous 12 months
ANXIETY	49%	66%
DEPRESSION	34%	53%
BURNOUT	41%	64%
HOPELESSNESS	29%	46%
SELF-DOUBT	45%	64%

#### **HIGH ACHIEVERS AND THE IMPOSTER SYNDROME:**

Imposter Syndrome (AKA The Imposter Phenomenon) When highlycapable people doubt that they are as good as people say. Often goes hand in hand with perfectionism, accompanied by anxiety and depression.

In a study of four ability groups ranging from very low to high, the <u>high achievers were the only people</u> <u>who under-estimated their skill.</u>

Most people with impostor feelings suffer in silence—because part of the experience is that they're afraid they're going to be found out.

#### HIGH ACHIEVERS TEND TO EXPERIENCE AND DISPLAY A UNIQUE MIX OF:

Intellectual Overexcitability:	<ul> <li>Curious, questioning, and sharp.</li> <li>Ask questions, go deep into interesting topics, talk about theoretical concepts.</li> <li>Able to grasp those concepts faster than most.</li> </ul>
Imaginational Overexcitability:	<ul> <li>Live in their imaginations, often daydream, doodle, otherwise occupy their minds.</li> <li>Focus and concentration are very difficult.</li> </ul>
Sensual Overexcitability:	<ul> <li>Receive amplified sensory input, and react strongly to sound, light, textures, etc.</li> <li>These reactions range from a strong desire to continue (positive) to a strong desire to avoid entirely (negative).</li> </ul>
Psychomotor Overexcitability:	<ul> <li>Have a lot of excess energy that manifests as fidgeting, rapid or excessive talking, overactive physical behavior.</li> <li>Often misidentified as ADHD.</li> </ul>
Emotional Overexcitability:	<ul> <li>Appear overly dramatic or out for attention, but typically just feel emotions— whether positive or negative—much more intensely than most.</li> </ul>



at the very point in their lives when social relationships take center stage.

The reality is that there are likely to be many more "cracked eggs" —more nervous systems on the edge of distress than ever before.

Social "learning loss" might be even greater than academic learning loss ...

## We have the chance to be a part of this:



# Or this:







PAY ATTENTION TO THE RED FLAG FEATURE! Warning signs of mental distress:

A Having trouble functioning properly in daily life.

• Feeling very sad, withdrawn, or unmotivated (more than 2 weeks).

- Overwhelming fear with a racing heart or fast breathing.
- Always feeling worried, stressed out, and anxious.
  Extreme difficulty in concentrating or staying still.
- Having sudden and frequent outbursts of intense anger or distress.
- \* Socially withdrawing and isolating more and more.
- \* Feeling disconnected or detached.
- \* Feeling worthless and extremely guilty almost all the time.
- \* Experiencing extreme and intense mood swings.
- \* Drastic changes in personality, thoughts, hygiene, and behavior.
- \* Drastic changes in appetite and weight.
- \* Having trouble sleeping—either sleeping too much or too little.
- Section 3.1 Sec
- \* Out-of-control or risk-taking behaviors including excessive use of drugs or alcohol.



**DISRUPTING THE DISTURBANCE, ACTIVATING RECOVERY, AND ENHANCING SKILL.** 

COUNTERACT THEIR IMPLICIT FEAR BY ACTIVELY DIRECTING THEIR ATTENTION TO HOW IT FEELS TO PERFORM SOMETHING (ANYTHING) WELL.

#### **TURN IMPLICIT FEAR**

"WHAT I DON'T WANT" = WHAT I AM AFRAID WILL HAPPEN. (Thoughts that include don't, not, no, can't.)

INTO POWERFUL FOCAL POINTS AND DIRECT COMMANDS

"WHAT I WANT" = HOW IT FEELS TO PERFORM WELL. (Thoughts that include do, can, am, will, want to.)

# DEVELOP THE ABILITY TO STAY IN CONTROL WITH THESE QUICK SELF-REGULATION SKILLS!

BE SURE TO TURN OFF YOUR OWN ALARM BEFORE ASSISTING OTHERS! FULL NOSTRIL BREATHING activates the vagus nerve, which directly controls your heart rate, physical responses, and how your brain functions.

BALANCED BREATH (equal length inhale and exhale) stabilizes both branches of the nervous system. CLEANSING BREATH (longer exhale than inhale) lowers the alarm and calms the body.

## **MORE QUICK SELF-REGULATION SKILLS**

Breathe well!	Think in the present tense and say it the way you want it!	Shake it off, like a wet dog!
Tune into the areas of your body that are <u>the</u> <u>most comfortable.</u>	"Butterfly pats".	Breathe and squeeze.

#### Rock your body.

Internally repeat your favorite calming or focusing word.

# ACTIVATE A MORE ADAPTIVE LEVEL OF COPING!

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FIGHT	Kill or be killed.	Fix it!
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#### PERFORMING AT THE TOP OF YOUR GAME

Practical Strategies for WHEN IT REALLY COUNTS



SHIRLEY STRATTON DORRITIE

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