



THE STACK AGAINST YOUTH WELL-BEING

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Why modern systems are layering risk for youth and young adults and why prevention must start upstream.

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SUMMARY

What's happening

Over the past decade, indicators of youth and young adult well-being have worsened across emotional, social, and physical domains. This shift cannot be explained by a single cause. Evidence increasingly points to a layered risk environment, with multiple moderate pressures accumulating across daily life and interacting over time, weakening regulation, resilience, and belonging. This report introduces **The Stack (A–M)**, a cause-cluster framework showing how moderate pressures compound into high-risk trajectories.

What this paper does

Developed by Mission Save a Life (MSAL), this paper synthesizes national surveillance data and peer-reviewed research to map upstream drivers shaping youth well-being today, including social connection, digital environments, education systems, physiology, stress exposure, meaning-making, and emerging technologies such as AI. It offers a prevention-first framework for how these factors stack and amplify one another, with a practical focus on equipping the adults around youth.

What this paper is not

This is not clinical guidance and does not provide diagnosis, treatment, or medical advice. It is designed for community education, shared understanding, and prevention-oriented strategy, helping families, schools, and youth-serving organizations reduce risk earlier, before distress escalates into crisis.



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OVERVIEW

This paper offers an upstream framework for understanding why youth and young adult well-being is declining—and why, for some, distress is progressing to crisis, self-harm, and suicide risk.

It synthesizes population-level signals and research across multiple domains and organizes them into a practical map of upstream contributors that can help explain how risk escalates.

The goal is to support clearer prevention conversations so fewer young people reach crisis: what conditions are changing, how they interact, and where communities can reduce avoidable load.

3 KEY LENSES

This paper is organized around three lenses that shape how youth well-being is understood. Together, they move from *why this age window matters*, to *how regulation works*, to *what is stacking today*.

Why This Population (Why it matters)

Ages 10–25 represent a high-leverage developmental window, when core patterns of regulation, identity, belonging, and coping consolidate and shape later life trajectories. Rising rates of self-harm and suicidal thinking make upstream prevention especially urgent—so fewer young people enter the system through crisis.

Rethinking Mental Health (Mind–Heart–Body)

This paper uses well-being in a whole-person sense. Youth distress is rarely a “mind-only” issue; it is more accurately understood as a regulation challenge across mind, heart, and body.

The Cause-Stacking Framework (The Stack A–M)

Most harm is not caused by one factor; it emerges from layers that stack. This paper maps the major cause clusters (A–M) shaping youth well-being today and shows how they interact over time, shifting the question from “What’s the cause?” to “What’s in the stack, and where can we reduce the load?”



This paper answers one question:

What is driving the decline in youth and young adult well-being?

Population focus:

Youth (roughly 10–17) and young adults (roughly 18–25), with specific emphasis on high school and college/emerging adulthood contexts.

KEY TAKEAWAYS

- **Well-being is a mind–heart–body capacity—often best described as vitality.** Vitality is sustainable energy to regulate, recover, and stay engaged across **mind–heart–body**, not “mind-only” mental health.
- **Modern systems are draining human vitality.** Always-on speed and intensity increase exposure dose while reducing recovery time.
- **Youth and young adult well-being is declining—and crisis signals are rising.** More youth are reaching self-harm and suicidal thinking, making prevention increasingly urgent before crisis becomes the entry point.
- **Youth and young adult well-being rarely declines for a single reason.** Multiple moderate pressures can compound across daily life until risk accelerates and becomes harder to unwind.
- **The Stack (A–M) maps upstream drivers of youth well-being as cause clusters.** These system-level pressures—across home, school, peers, platforms, and body inputs—interact to erode protective buffers (connection, recovery, and meaning) over time.
- **Preventing youth decline requires coordinated, multi-sector action.** Because the stack spans home, school, peers, and platforms, durable improvement requires upstream alignment—not a single-program fix.
- **This report synthesizes evidence; it does not estimate causality for youth outcomes.** Most population-level findings are observational and should be interpreted within the stated **Methods & limitations**.

HOW TO READ THIS PAPER (QUICK GUIDE)

1. Start with **Why This Population** and the **Mind–Heart–Body** lens.
2. Then read **Cause Cluster Stacking** to learn how layers accumulate.
3. Use **The Stack (A–M)** as a reference, not something to read straight through.
4. Begin with 2-4 clusters most relevant to your setting; use **Common Stacks** examples to support prevention conversations.

HOW TO CITE THIS REPORT

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HOW THIS PAPER CAN BE USED

This section highlights practical ways to apply the framework across families, schools, and youth-serving communities (educational and non-prescriptive).

BUILD SHARED LANGUAGE

Provide a **common vocabulary** for what youth are experiencing (upstream drivers, cause clusters, and stacking), so adults and institutions can name patterns early and talk about risk **without stigma or alarmism**.

GUIDE COMMUNITY EDUCATION AND MESSAGING

Support prevention-oriented, public-facing education for parents, educators, coaches, mentors, faith leaders, and other trusted adults by:

- normalizing whole-person well-being (mind, heart, and body)
- clarifying how modern pressures interact and accumulate
- shifting focus to upstream conditions that can be changed

INFORM STRATEGY AND ALIGNMENT

Help organizations and communities align strategy (including strategic planning, board-level, and cross-sector conversations) by:

- aligning around **upstream priorities** (e.g., belonging, regulation inputs, repair after mistakes, access to protective adults)
- identifying where systems may unintentionally add load
- identifying leverage points to reduce risk earlier

SUPPORT TOOL AND RESOURCE DEVELOPMENT

Provide structure for developing **educational tools** (materials, conversation guides, early-signal frameworks, or technology-enabled supports) with clear boundaries, safeguards, and escalation pathways for safety concerns.

IMPORTANT NOTE ON USE

This paper is intended to **inform understanding and guide prevention-first thinking**, not replace clinical care, crisis response, or professional judgment. It works best alongside **protective relationships, skilled adults, and appropriate support systems**.



SCOPE AND BOUNDARIES

This paper is a **prevention-first** synthesis and framing document developed by Mission Save a Life (MSAL). It organizes national surveillance data and peer-reviewed research into an **upstream framework** for understanding why youth and young adult well-being is declining.

Rather than evaluating individual risk or symptoms, the paper focuses on conditions and systems that shape regulation, belonging, and meaning over time.

THIS PAPER IS NOT

- clinical guidance, diagnosis, or treatment recommendation
- a screening, assessment, or risk-prediction tool
- a symptom checklist or intervention manual
- a political or ideological argument
- a technology policy proposal or regulatory blueprint
- a blame framework (it does not assign fault to youth, families, schools, technology companies, or any single institution)

IN SCOPE

- Upstream drivers and contributors across social, cultural, educational, digital, physiological, economic, and technological domains
- How factors interact and accumulate over time (cause-cluster stacking), rather than how they operate in isolation
- Population-level patterns and conditions shaping youth (roughly ages 10–17) and young adults (roughly ages 18–25), with emphasis on high school and college/emerging-adulthood contexts
- Community education and shared language to recognize and respond to stacked pressures earlier

OUT OF SCOPE

- Individual diagnosis, clinical decision-making, or treatment planning
- Causal claims beyond what the cited evidence supports
- Prescriptive solutions, programs, or interventions (covered in separate MSAL materials)
- Real-time safety assessment or crisis-response guidance



METHODS & LIMITATIONS

This section briefly describes the evidence sources, synthesis approach, and limitations of this paper to support transparency and appropriate interpretation.

EVIDENCE SOURCES AND SYNTHESIS APPROACH

This paper is a **synthesis and framing document**, not an original empirical study. It draws on:

- **National surveillance and trend data**, including the CDC Youth Risk Behavior Survey (YRBS), the Healthy Minds Study (HMS), and national mortality data systems (e.g., NCHS / WISQARS), to identify population-level shifts in youth and young adult well-being.
- **Peer-reviewed research**, with emphasis on systematic reviews, meta-analyses, and large observational studies examining upstream drivers of mental health, well-being, and related outcomes.
- **Public-health advisories and consensus reports** from established institutions (e.g., the U.S. Surgeon General, CDC), particularly where evidence spans multiple domains (connection, sleep, digital environments, stress, and development).

Rather than testing hypotheses or estimating causal effects, the paper organizes existing evidence into a **framework**. Contributing factors are grouped into **cause clusters (A–M)** to highlight how moderate pressures can **interact and accumulate over time**.

AI and algorithmic systems are treated as **contextual amplifiers** of existing risks, not as standalone causes, and are discussed in relation to the domains they most directly affect (e.g., comparison, social threat, attention, and displacement of protective behaviors).

WHAT THIS PAPER DOES NOT DO

This paper does not:

- collect or analyze original participant-level data
- rank or quantify the relative importance of individual cause clusters

Its goal is **conceptual clarity and upstream understanding**, not prediction, screening, or prescription.

LIMITATIONS

Several limitations should be noted:

- **Evidence base variability:** Some domains (e.g., sleep, social connection, chronic stress) are supported by extensive longitudinal and meta-analytic evidence, while others (e.g., certain digital or AI-related exposures) rely more heavily on observational studies and emerging research.

- **Causality constraints:** Much of the evidence linking upstream conditions to youth well-being is observational. Associations should not be interpreted as proof of direct causation unless explicitly supported by the cited literature.
- **Heterogeneity across populations:** Youth experiences vary widely by context, culture, socioeconomic conditions, and local systems. The framework is designed to identify common patterns, not to capture every individual pathway.
- **U.S.-centric focus:** The paper primarily draws on U.S. data sources and policy contexts. While many dynamics may generalize, findings may not fully reflect experiences in other countries.
- **Evolving environments:** Digital platforms, AI systems, and social conditions are changing rapidly. Evidence in these areas will continue to evolve, and conclusions should be revisited as higher-quality data becomes available.

These limitations do not invalidate the framework; they underscore the importance of using it as a **living, prevention-oriented lens**, rather than a fixed or exhaustive model.

WHY THIS POPULATION

Youth and young adulthood represent the highest-leverage window for prevention and long-term outcomes. During ages 10–25, core patterns of stress regulation, belonging, identity formation, coping, and risk behavior consolidate, shaping health, learning, relationships, and functioning for decades to come. This is also the window in which rising self-harm and suicide indicators signal that upstream prevention is increasingly urgent.



THE DATA SHIFT

National surveillance and large-scale studies show that this developmental window has experienced a clear and sustained shift in distress indicators over the past decade, including increases in self-harm and suicidal thinking, not simply increased awareness or reporting.

U.S. high schoolers reporting persistent sadness and hopelessness rose from 28% (2011) to 42% (2021).

U.S. high school (CDC Youth Risk Behavior Survey):

Historical comparisons show substantial increases between **2011 → 2021**:

- Persistent sadness/hopelessness: 28% → 42%
- Seriously considered suicide: 16% → 22%
- Attempted suicide: 8% → 10%
- Teen girls (illustrative): persistent sadness/hopelessness 35% → 57% (boys: 21% → 29%)

In **2023**, CDC reported modest improvement from 2021 levels, but rates remain **historically elevated**:

- Persistent sadness/hopelessness: **~40%**
- Seriously considered suicide: **20.4%**
- Attempted suicide: **9.5%**
(with higher prevalence among female students)

College/emerging adulthood (Healthy Minds Study):

National trend evidence from the **Healthy Minds Study** shows that between **2013 → 2021**:

- Positive screens increased roughly **135% for depression** and **110% for anxiety**
- In **2020–2021**, over **60%** of students met criteria for one or more mental health problems — nearly **50% higher than 2013**

About

50%

of lifetime mental disorders begin by the mid-teens, and ~75% by the mid-20s—making ages 10–25 a high-leverage prevention window. (Kessler et al., 2005)

WHY TIMING MATTERS (NOT “JUST A PHASE”)

Developmental research shows that approximately 50% of lifetime mental disorders begin by the mid-teens, and around 75% by the mid-20s, making ages 10–25 a uniquely high-leverage window for prevention (Kessler et al., 2005).

Early distress is not only disruptive in the moment; it is associated with later impairment in education, employment, and psychosocial functioning, underscoring why upstream intervention during this window matters (Wickersham et al., 2021). That also means this period is uniquely actionable: strengthening buffers and reducing avoidable load here can shift trajectories before patterns harden and crisis becomes the entry point.

WHY IT MATTERS FOR SOCIETY

Education and workforce readiness: regulation challenges, sleep loss, and distress can undermine learning, persistence, and early-career stability; effects that compound across the lifespan. (Wickersham et al., 2021)

Whole-person health: chronic stress and dysregulation are not “mind-only.” They interact with sleep, metabolic health, inflammation, and risk behaviors, shaping long-term physical outcomes.

Families and future generations: today’s youth are tomorrow’s parents, caregivers, leaders, and community builders. If connection skills, self-regulation, and purpose formation are compromised now, the effects compound.

Premature mortality risk: suicide was the **second leading cause of death** in 2023 for people ages **10–14** and **15–24**, underscoring why prevention in this developmental window matters (Garnett et al., 2025).

Bottom line: Understanding this generation’s risk context is not about blame. It’s about identifying the upstream conditions shaping regulation, connection, meaning, and health, so prevention becomes practical and scalable.

MIND-HEART-BODY LENS

Well-being isn't a mind problem—it's a regulation problem across mind, heart, and body.

Well-being is not a mind-only phenomenon. It reflects a person's vitality: the capacity to regulate, recover, and stay engaged with life across mind, heart, and body. For youth and young adults, distress is therefore more accurately understood as a whole-person regulation challenge, rather than as isolated thoughts or emotions (Office of the Surgeon General, 2023).

Vitality shows up in everyday functioning. It is visible in emotional steadiness, attention and cognitive flexibility, impulse control, motivation, relational engagement, and hope. These capacities are shaped by daily conditions, not by cognition alone.

REGULATION AS THE FOUNDATION

Regulation refers to the ability to respond to stress, return toward baseline, and remain connected to people and tasks over time. When regulation is supported, young people can experience difficulty without spiraling. When regulation is overloaded, vitality narrows. Recovery slows, reactivity rises, and coping options shrink.

Public-health syntheses consistently show that regulation depends on interacting systems, not a single domain (Office of the Surgeon General, 2023; Verlenden et al., 2024). Strain in one system often affects the others.

THE THREE INTERDEPENDENT DOMAINS

Mind

This includes mood, anxiety, attention, learning, and self-concept. Cognitive and emotional processes depend on adequate sleep, manageable stress load, and a sense of safety. When these supports weaken, thinking becomes narrower, more threat-focused, and less flexible.



MIND WELL-BEING

mood, anxiety, attention,
cognitive flexibility, self-
concept



BODY WELL-BEING

sleep, movement, nutrition,
metabolic and inflammatory
balance



HEART WELL-BEING

connection, belonging,
emotional regulation,
purpose, and hope

Body

Physiological inputs shape vitality directly. Sleep, movement, nutrition quality, metabolic balance, and inflammatory load influence energy, impulse control, emotional recovery, and stress sensitivity. Disturbances in these inputs are strongly associated with depressive symptoms, anxiety, and functional impairment in youth populations (Office of the Surgeon General, 2023; Verlenden et al., 2024).

Heart

Relational and meaning-based systems include belonging, trust, emotional connection, purpose, and hope. Stable relationships act as regulatory buffers. When belonging erodes or social threat is persistent, stress reactivity rises and vitality declines, even when other supports are present (Office of the Surgeon General, 2023).

These domains are analytically distinct but biologically and behaviorally intertwined.

WHY CASCADES MATTER

Many modern exposures affect **multiple domains at the same time**.

Digital comparison can heighten anxiety while displacing sleep and in-person connection. Chronic stress can increase emotional reactivity while impairing attention and recovery. Loneliness can intensify depressive thinking while also increasing physiological risk. When these pressures stack, challenges do not remain within a single system. They cascade, amplifying vulnerability and steadily draining vitality (Office of the Surgeon General, 2023).

This helps explain why youth distress often presents as clusters of difficulties rather than isolated symptoms.

IMPLICATIONS FOR PREVENTION

A prevention-first approach does not begin by asking only what a young person is thinking or feeling. It asks:

What daily conditions are shaping regulation, belonging, and meaning?

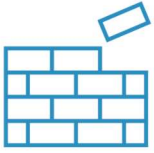
Which inputs are degraded, and how are they stacking?

When vitality is understood as a **mind–heart–body capacity**, upstream drivers can be identified earlier. Strengthening regulation in one domain, or restoring support in another, can shift the entire system before distress escalates into crisis (Verlenden et al., 2024).

BRIDGE TO THE STACK

This whole-person view of vitality sets up the central framework of this paper. If vitality depends on interacting inputs across mind, heart, and body, then decline is unlikely to be caused by a single factor. It is more likely to emerge when **multiple moderate pressures accumulate and interact over time**.

That pattern is what the next section makes visible.



What is It

CAUSE CLUSTER STACKING

Youth decline is often the result of layers, not a single cause.

The Stack

A: Connection Collapse
B: Digital Life
C: Public Shaming
D: Pressure to Achieve
E: Parenting Systems
F: School Systems
G: Identity Strain
H: Body Inputs
I: Chronic Stress & ACEs
J: Reward Loops
K: Public Division & Negativity
L: Purpose Drought
M: AI as Amplifier

Why it Matters

Single-cause debates keep us stuck. Stacking shows why distress can escalate fast — multiple “moderate” pressures can combine into a high-risk load.

What to do

Shift from “What’s the cause?” to “What’s in the stack?” Then reduce inputs that dysregulate and strengthen the conditions that protect.

CAUSE CLUSTER STACKING

Most harm isn’t caused by one thing; it’s caused by layers that stack.

When we look at youth distress through a single lens (social media, bullying, academics, family), we miss what’s happening. The more accurate pattern is **cause cluster stacking**: multiple pressures building at the same time, across different parts of life, until the system can’t regulate well.

Each factor alone may be manageable. When several are present at once, they interact in ways that escalate risk and reduce recovery capacity over time.

This is why prevention can’t be “fix one problem.” A prevention-first approach asks: **What’s stacking for this person right now?** Then it asks where we can remove loads, strengthen buffers, and restore regulation early, before the pile-up becomes crisis.

It’s rarely one cause. It’s the pile-up.

COMMON STACKS (EXAMPLES):

The following examples illustrate how multiple moderate pressures commonly stack in real youth and young adult lives.

Performance loop: (D+ F) pressure to achieve → (H) sleep sacrifice → (B) more scrolling/comparison → (H) less movement & poorer inputs → (A) withdrawal/loneliness → (J) short-term coping behaviors

Family stress loop: (E + I) instability or high stress at home → lower felt safety → (C) online conflict sensitivity → (A) social withdrawal → (K) negativity overload → (J) substance/escape loops

Meaning gap loop: (G) Identity Strain → (L) purpose drought → (B+ K) doomscrolling + “future collapse” → (H) sleep disruption → rising anxiety/low motivation → (A) disconnection → (J) reward seeking to numb

Social threat loop: (C) public shaming/ostracism → (A) disconnection → (K) negativity overload → (H) sleep disruption → rising anxiety/reactivity → (J) coping/escape loops

These patterns help explain how vitality can erode gradually, not because of one failure, but because multiple pressures accumulate without relief.

THE STACKS SUMMARY:

Cluster	What it is (short description)
A	Connection collapse: loneliness, belonging erosion, fewer stable in-person “containers” and protective adults.
B	Digital life: algorithmic comparison, attention capture, displacement of sleep/connection, compulsive engagement loops.
C	Public shaming: online social threat, humiliation, ostracism, “always-on” reputational risk and vigilance.
D	Pressure to achieve: perfectionism, contingent worth, performance identity and high-stakes evaluation.
E	Parenting systems: role modeling, attachment/felt safety, stress spillover, autonomy support vs. overcontrol/absence.
F	School systems: belonging/connectedness, accountability signals, skill-building, and repair vs. humiliation/exclusion.
G	Identity strain: labeling and rigidity, reduced self-concept flexibility, identity threat and confusion under visibility.
H	Body inputs: sleep loss, movement decline, nutrition/metabolic strain—physiological foundations of regulation.
I	Chronic stress & ACEs: trauma and ongoing stress load, fewer buffers, higher allostatic load and threat sensitivity.
J	Reward loops: substances and compulsive coping behaviors (e.g., alcohol, nicotine/vaping, cannabis, pornography, gaming).
K	Public division & negativity: conflict saturation, doomscrolling, chronic threat cues, hope/agency erosion.
L	Purpose drought: weakened meaning, contribution, and “why” structures; greater pull toward substitutes and status.
M	AI as amplifier: recommender amplification, synthetic peers, reality distortion, and surveillance pressures increasing dose/speed.



A: CONNECTION COLLAPSE

Cause Cluster A: Social connection collapse (loneliness, belonging, and community erosion)

Connection collapse is the erosion of stable, supportive relationships and in-person belonging that help youth feel known, safe, and supported. It matters because loneliness is a whole-person stressor that degrades mood, cognition, sleep, and long-term health (Office of the Surgeon General, 2023; Cacioppo & Hawkley, 2009; Holt-Lunstad et al., 2010). This cluster is system-level (not a blame statement about individual effort) and includes family, school, community, and technology conditions that shape connection.

A.1 WHAT CHANGED: FEWER STABLE “CONTAINERS” FOR BELONGING

A consistent theme across decades of social research is the erosion of stable, in-person community structures—multi-age networks, neighborhood ties, and durable civic participation—paired with rising time spent in individualized, screen-mediated environments (Putnam, 2000; Office of the Surgeon General, 2023).

For youth and emerging adults, this can look like:

- Less time in **teams/clubs/faith or community groups** and fewer “third places” to gather regularly
- Fewer **mentorship bonds** and fewer consistent “safe adults” outside immediate family
- More social life routed through platforms that reward **visibility, speed, performance, and reaction** rather than depth (Office of the Surgeon General, 2023)

This intersects with **performance pressure and identity fragility** (Cause Clusters D and G) because when belonging is conditional on achievement or status, connection becomes more stressful and less protective.

A.2 WHY IN-PERSON CONNECTION MATTERS

In-person connection provides regulatory inputs that digital interaction cannot fully replicate:

- **Nonverbal safety cues** (facial expression, tone, posture, synchrony) that help the nervous system downshift
- **Co-regulation** (a calm, caring person stabilizes emotion faster than self-talk alone), consistent with stress-buffering models of social support (Cohen & Wills, 1985; Uchino, 2006)
- **Physical presence and appropriate touch** (e.g., safe hugs) that can reduce physiological stress responding; experimental work shows touch-based interventions can reduce cortisol responses to stress (Dreisoerner et al., 2021; Heinrichs et al., 2003)

- **Repair practice:** real-time rupture-and-repair skills (apology, forgiveness, perspective-taking) that protect long-term relational stability

Because the protective effect of connection is partly physiological, a “high-message/low-presence” social environment can leave youth undernourished in the relational experiences that build resilience (Uchino, 2006; Office of the Surgeon General, 2023).

A.3 MECHANISMS BY WHICH CONNECTION COLLAPSE DEGRADES WELL-BEING

When stable belonging erodes, several risk pathways intensify:

- **Lower belonging / lower felt safety**, increasing vulnerability to depressive and anxious thinking (Office of the Surgeon General, 2023)
- **Greater threat sensitivity** and negative cognitive bias, which loneliness research links to changes in social cognition and mood-related processes (Cacioppo & Hawkley, 2009)
- **Reduced stress buffering**, because fewer supportive relationships means fewer “shock absorbers” when pressure rises (Cohen & Wills, 1985; Uchino, 2006)
- **More reliance on substitutes** (scrolling, compulsive reward loops), intersecting with **reward-seeking/addiction clusters** (Cause Cluster J)

A.4 CO-PRESENT DISTRACTION: PHONES DURING IN-PERSON TIME (“PHUBBING”)

Even when youth and families are physically together, phone-checking can fragment attention and reduce the felt experience of connection (“parallel solitude”). Research suggests:

- In a nationally representative U.S. survey, many adults report that phone use in social gatherings **frequently or occasionally hurts the conversation** (Rainie & Zickuhr, 2015).
- Experimental work suggests the **presence** of a phone can reduce perceived conversation quality and relationship outcomes during meaningful interactions (Misra et al., 2016; Przybylski & Weinstein, 2013).
- “Mere presence” effects also extend to cognition: when a smartphone is nearby (even unused), available cognitive capacity can be reduced (“brain drain”), which may make presence and empathy harder to sustain (Ward et al., 2017).
- Youth-relevant evidence links adolescents’ phubbing behavior to depression, with proposed pathways through peer relationship quality and unmet psychological needs (Zhang et al., 2024).

This often reduces the felt quality of connection, even when people are physically together.

A.5 EXAMPLE: SCHOOL CONNECTEDNESS

One concrete indicator of belonging is **school connectedness**—students’ belief that adults and peers at school care about them and their learning. Consistent with the broader connection-collapse thesis, school connectedness is associated with lower prevalence of suicidal thoughts/behaviors and other risk indicators in

youth samples (Marraccini & Brier, 2017; Verlenden et al., 2024). **Boundary:** this report’s full discussion of school connectedness—and the school-system mechanisms that build or erode it—sits in **Cluster F (School systems)**.

Implication (as an example): belonging is measurable and protective. When connectedness erodes in a setting where youth spend most of their day, risk indicators tend to rise—one reason schools are treated as a primary prevention lever in Cluster F.

A.6 HOW THIS CLUSTER STACKS

- **With Cluster B (Digital life):** time displacement and co-present distraction reduce in-person belonging and deepen “reachable-but-alone” patterns.
- **With Cluster H (Body inputs):** loneliness and low support increase arousal and rumination; sleep loss then reduces emotion regulation and increases withdrawal.
- **With Cluster C (Public shaming):** fear of humiliation or ostracism pushes youth toward avoidance and isolation, shrinking real-world repair practice and support.
- **With Cluster D (Pressure to achieve):** when belonging feels conditional on performance, connection becomes stressful rather than protective.
- **With Cluster J (Reward-loops):** isolation increases demand for fast relief; reward-loop coping can further reduce connection and deepen shame.

Bottom line: Connection is a foundational buffer. When stable in-person belonging and protective adults thin, youth become more vulnerable to stress reactivity, withdrawal, and reliance on substitutes—especially in a high-stimulation digital environment.



B: DIGITAL LIFE

Cause Cluster B: Digital life + algorithmic social comparison (social media, smartphones, attention capture)

Digital life refers to the always-on ecosystem of smartphones, social media, and algorithmic feeds shaping how youth connect, compare, and regulate. It matters because these environments can increase dose and reduce recovery—amplifying social comparison and threat while displacing sleep, movement, and in-person connection. This cluster is not anti-technology; it highlights how design, content, and context determine whether digital life functions as a buffer or an amplifier.

B.1 WHAT CHANGED: OPTIMIZED FOR RETENTION

Over the past decade, social media and smartphones became nearly universal in youth and young adult life, with engagement increasingly shaped by recommender systems optimized for attention and retention. Public health authorities have highlighted a key gap: despite widespread youth exposure, the evidence base and independent safety evaluation are not yet at a level where we can conclude these systems are “safe by default” for developing minds (Office of the Surgeon General, 2023).

This cluster intersects heavily with **Cluster A (connection erosion)** through displacement of in-person belonging, and with **body-regulation clusters** through sleep disruption and chronic stress arousal.

B.2 MECHANISMS: HOW DIGITAL ENVIRONMENTS CAN DEGRADE WELL-BEING

Digital life is not a single exposure; effects depend on **dose, content, design, context, and individual vulnerability**. Still, several mechanisms appear consistently across reviews and public health syntheses:

- **Displacement of protective behaviors.** Time and attention spent online can crowd out sleep, movement, focused learning, and in-person connection—especially when use extends late into the night (Office of the Surgeon General, 2023).
- **Algorithmic social comparison.** Platforms often deliver an optimized stream of high-status, high-appearance, high-performance content. This can intensify upward comparison, body image dissatisfaction, and pressure to self-present (Faelens et al., 2021; Sala et al., 2024).
- **Sleep disruption.** Late-night use, notifications, and “one more scroll” design can degrade sleep timing and quality—an important pathway because sleep loss worsens emotion regulation and impulse control (Office of the Surgeon General, 2023).
- **Social threat persistence.** Cyberbullying, harassment, and public humiliation can follow youth home, become permanent, and feel inescapable—raising baseline stress and vigilance (Office of the Surgeon General, 2023).

- **Compulsive engagement loops.** Infinite scroll, variable rewards, streaks, and push notifications can reinforce habitual checking and longer sessions, increasing vulnerability to compulsive patterns (Bhargava & Velasquez, 2021; Sala et al., 2024).
- **Cognitive “attention tax.”** Even when not actively used, the mere presence of a smartphone can pull cognitive resources away from the moment, which matters for learning, empathy, and conversation quality (Ward et al., 2017).

B.3 WHAT THIS LOOKS LIKE IN YOUTH LIFE

- Checking the phone within minutes of waking; mood shifts based on what the feed delivers.
- Late-night scrolling “to relax” that turns into 60–90 minutes, followed by shorter sleep and harder mornings.
- Feeling behind or inadequate after comparison content; cycling between self-criticism and more scrolling for relief.
- Friend-group stress moving across platforms (group chats, streaks, unfollows), creating persistent vigilance.

B.4 DISTORTED REALITY: “WHAT’S REAL?”

A distinctive stressor today is that the “social world” youth consume is disproportionately **the best moments, the most polished images**, and increasingly **AI-enhanced or heavily edited content**. This can widen a “reality gap”:

- Youth see others’ peaks while living their own behind-the-scenes, fueling chronic inadequacy and self-criticism.
- Filters and optimization can raise the perceived baseline of beauty, success, and lifestyle—making normal life feel like failure.
- When feeds blend real life, performance, ads, and synthetic/edited media, it becomes harder to judge what is authentic, trustworthy, or attainable.

Research syntheses repeatedly identify **social comparison** and **self-presentation pressure** as central pathways linking social media use with worse well-being and body image outcomes (Faelens et al., 2021; Sala et al., 2024). In other words, the risk is not only “screen time,” but **the kind of reality the screen delivers**.

B.5 THE INCENTIVE PROBLEM: PROFIT-FIRST OPTIMIZATION AND THE REGULATION GAP

This topic is contentious, but it can be stated without inflammatory language:

1. **Business model incentives.** Many major platforms are financed via advertising and therefore optimize for engagement and data extraction. Engagement optimization can unintentionally reward emotionally activating content and reinforce compulsive use patterns (Bhargava & Velasquez, 2021).
2. **Independent safety evaluation lags exposure.** The U.S. Surgeon General’s advisory notes that the research and transparency ecosystem has not kept pace with youth adoption and exposure (Office of the Surgeon General, 2023).

3. **Public record of internal-harm allegations.** Whistleblower testimony and investigative reporting describe internal awareness of some youth harms alongside difficult tradeoffs between safety changes and growth metrics (Haugen, 2021; Wells et al., 2021). These claims are debated, but they have shaped policy and litigation discourse.
4. **Regulation is evolving unevenly.** The EU Digital Services Act (DSA) establishes systemic-risk obligations for major platforms and includes stronger protections for minors, while U.S. approaches remain more fragmented and contested (European Parliament & Council of the European Union, 2022; European Commission, 2025).

B.6 HIGH-AROUSAL CONTENT + COMPULSIVE ENGAGEMENT LOOPS

A key risk pathway is not “screen time” in the abstract, but repeated exposure to **high-arousal, emotionally activating content** delivered in environments optimized for retention. Infinite scroll, variable rewards, and frictionless switching can make it difficult to disengage, extending sessions and increasing dose—especially when youth are already stressed or seeking relief (Office of the Surgeon General, 2023; Bhargava & Velasquez, 2021; Sala et al., 2024). **Boundary:** when the content stream is dominated by chronic negativity, threat cues, or “doom” narratives (doomscrolling), that mechanism is treated in **Cluster K**.

B.7 HOW THIS CLUSTER STACKS

- **With Cluster H (Body inputs):** late-night use, notifications, and arousal displace sleep and degrade recovery.
- **With Cluster A (Connection collapse):** time displacement + co-present distraction reduces in-person belonging and access to protective adults.
- **With Cluster D (Pressure to achieve):** comparison and visibility can intensify perfectionism and fear of falling behind.
- **With Cluster C (Public shaming):** platform dynamics can amplify humiliation, harassment, and reputational threat.
- **With Cluster J (Reward-loops):** compulsive engagement patterns can function like short-cycle coping, tightening avoidance and relief-seeking loops.
- **With Cluster K/M (Negativity + AI amplification):** feeds can concentrate threat/doom content, and algorithmic systems can increase dose and speed of exposure.

Bottom line: Digital life is not a single exposure, but modern platforms can increase dose and reduce recovery by amplifying comparison and social threat while displacing sleep, movement, and in-person connection.



C: PUBLIC SHAMING

Cause Cluster C: Online social threat, public shaming, and “cancel culture” dynamics

Public shaming captures online social threat: humiliation, ostracism, and reputational danger amplified by scale and permanence. It matters because social-evaluative threat can drive rumination, shame, sleep disruption, and withdrawal—especially in adolescents still building identity stability and repair skills. This section is not about “blaming platforms” or “blaming youth”; it focuses on how a high-visibility punishment dynamic can function as a stressor.

C.1 WHAT CHANGED: SCALE

- **Permanence:** screenshots, screen recordings, reposts, and searchable histories create “forever” consequences.
- **Scale:** one conflict can reach hundreds or thousands beyond the original relationship context.
- **Context collapse:** different audiences (friends, peers, family, school, strangers) judge the same content at once—often with different norms and expectations.
- **Speed:** outrage spreads faster than clarification, nuance, or repair.
- **Public metrics + pile-ons:** likes/shares/comments can reward escalation and intensify perceived stakes.

C.2 WHAT THIS LOOKS LIKE IN YOUTH LIFE

- **Cyberbullying / cyber-ostracism:** a private message gets screenshot and circulated; targeted harassment spreads across platforms; group chats form without someone; mass unfollows/blocks happen overnight.
- **Public pile-ons / “cancel” dynamics:** a short clip is posted out of context; comments demand punishment; thousands weigh in without relationship context; reputation becomes the story—and sometimes escalates into harassment or doxxing.

For many teens, these are not rare “edge cases.” They are **ambient possibilities** that shape what youth post, say, and risk, even when nothing is actively happening.

C.3 MECHANISMS: HOW WELL-BEING DEGRADES

1. **Chronic vigilance + self-monitoring**
“Don’t say the wrong thing” → hypervigilance, anxiety, and constant self-editing (reduced authenticity).

2. **Ostracism pain (exclusion is processed as threat)**

Being ignored or excluded reliably triggers distress and threatens basic needs for belonging, control, self-esteem, and meaning (Williams, 2007).

3. **Shame fusion (“This is who I am forever”)**

When a mistake becomes public and permanent, shame can shift from “I did something” to “I *am* something,” increasing hopelessness and identity rigidity.

4. **Withdrawal + avoidance learning**

To prevent humiliation, youth may avoid conflict, avoid conversation, and increasingly avoid people—reducing real-world practice of **rupture-and-repair** (which normally builds resilience and relational skill).

5. **Spillover into body regulation**

Reputational threat increases arousal and rumination, which commonly degrades sleep and recovery—stacking risk with Cluster B (late-night scrolling), Cluster D (performance pressure), and Cluster H (sleep/metabolic inputs).

C.4 CYBERBULLYING AND CYBER-OSTRACISM

Cyberbullying and cyber-ostracism are forms of **targeted social threat**: repeated humiliation, harassment, exclusion, or status attack delivered through always-on channels. The harm is amplified by **persistence** (it follows youth home), **audience expansion**, and **permanence** (screenshots and reposts).

- **ABCD cohort (early adolescence)**: Experiencing cyberbullying (not perpetrating) was associated with suicidality, even after accounting for offline peer aggression and other factors (Arnon et al., 2022).
- **Meta-analysis (bullying and suicide outcomes)**: Bullying victimization, perpetration, and bully-victim status are each associated with increased risk for suicidal ideation and suicidal behaviors (Holt et al., 2015).
- **Mechanism study (cyber-ostracism, NSSI)**: Cyber-ostracism was associated with non-suicidal self-injury, with depression and experiential avoidance mediating pathways—consistent with an “exclusion → distress → avoidance/coping → harm risk” mechanism (Ding et al., 2022).
- **National surveillance (YRBS 2023)**: CDC analyses report associations between frequent social media use and higher prevalence of bullying victimization (school and electronic) and persistent sadness/hopelessness, alongside elevated prevalence of some suicide risk indicators (Young et al., 2024).

C.5 CANCEL CULTURE AND PILE-ON DYNAMICS

Cancel-culture and pile-on dynamics are a different pathway than cyberbullying. They are less about one perpetrator targeting one person, and more about **crowd-based punishment** after a perceived violation, often with moral framing, public metrics (likes/shares), and limited context.

- Adolescents are still learning judgment, nuance, empathy, and repair.
- Online systems can deliver **adult-scale public punishment** with minimal path to restoration.
- Because the audience is diffuse, there may be no clear way to apologize, make amends, or re-enter the group—so shame and withdrawal become more likely.

One analysis argues that teenage “cancel culture” can operate as a technosocial disruption that undermines social development, especially when rupture is not followed by repair (Van Grunsven & Marin, 2024). In this framework, that maps most directly to **shame fusion** and **avoidance learning** (C.3).

C.6 HOW THIS CLUSTER STACKS

- **With Cluster A (Connection collapse):** fear of ostracism reduces real-world connection and help-seeking.
- **With Cluster B (Digital life):** outrage and humiliation content can be engagement-amplified, raising exposure and perceived stakes.
- **With Cluster D (Pressure to achieve):** adds another domain where “one mistake = failure.”
- **With Cluster H (Body inputs):** arousal and rumination disrupt sleep and recovery, increasing reactivity the next day.
- **With Cluster J (Reward-loops):** shame and withdrawal increase relief-seeking; relief-seeking can deepen shame and avoidance.
- **With Cluster K (Public division & negativity):** persistent threat cues keep stress physiology activated.

Bottom line: If social media is treated only as “screen time,” we miss a distinct driver: for many youth, the online environment functions like an **always-on reputation courtroom**, and chronic social-evaluative threat is a direct pathway into dysregulation, withdrawal, shame, and suicidality risk.



D: PRESSURE TO ACHIEVE

Cause Cluster D: Performance pressure, perfectionism, and identity fused to outcomes

Pressure to achieve refers to contexts where evaluation is high-stakes and where self-worth becomes increasingly contingent on performance outcomes (Crocker & Wolfe, 2001; Crocker & Park, 2004). It matters because research links academic pressure and perfectionism with higher depression/anxiety risk in youth and young adult samples (Steare et al., 2023; Curran & Hill, 2019; Lunn et al., 2023). In this framework, Cluster D focuses on **performance-system dynamics**—competitive funnels, constant comparison, and escalating standards—and the downstream shame/avoidance loops that can follow when “mistakes” are experienced as threats to worth. **Boundary:** broader identity categorization, essentialism, and label-related identity threat across domains are addressed in Cluster G.

D.1 WHAT CHANGED: HIGH-STAKES EVALUATION + ALWAYS-ON VISIBILITY

Several shifts make striving feel more intense and less recoverable for today’s youth and emerging adults:

- **Higher perceived stakes + tighter funnels.** In many environments, academic and extracurricular performance feels like it determines access to opportunity (scholarships, programs, admissions, status). Research on academic pressure shows consistent associations with adolescent depression/anxiety and self-harm/suicidality indicators (Steare et al., 2023).
- **Always-on evaluation and visibility.** Performance is increasingly public (grades portals, rankings, highlight reels, social metrics), making comparison constant and recovery from “mistakes” feel harder.
- **Perfectionism has risen across cohorts.** A large meta-analysis found multidimensional perfectionism increasing over time in college students (Curran & Hill, 2019).
- **Pressure-cooker contexts carry distinct risk.** Work on high-achieving school settings identifies excessive pressure to excel as a meaningful adolescent risk factor linked to distress and maladaptive coping patterns (Luthar et al., 2020).

D.2 OUTCOME–IDENTITY FUSION: “I AM WHAT I ACHIEVE”

A core mechanism is **identity fusing to an outcome or role**:

- “I’m an A student.” “I’m the starter.” “I’m the scholarship kid.”
- When the outcome changes (a poor grade, being cut, injury, rejection), the young person doesn’t just feel disappointed—they can feel **erased**.

This maps to **contingencies of self-worth**: the more a person stakes worth in a domain, the more emotionally volatile that domain becomes, because failure threatens the self (Crocker & Wolfe, 2001). Related work argues that the *pursuit* of self-esteem (especially when conditional) can carry significant psychological costs (Crocker & Park, 2004).

D.3 WHAT THIS LOOKS LIKE IN YOUTH LIFE

- A “never enough” baseline: even strong performance feels fragile and temporary.
- Rest feels unsafe (“If I stop, I fall behind”); recovery time becomes guilt time.
- Small mistakes trigger shame and secrecy (hiding grades, avoiding feedback, avoiding adults).
- Future collapses into one funnel (one school, one sport, one identity), making setbacks feel catastrophic.

D.4 THE JOY DISAPPEARS: WHEN THE CLIMB BECOMES ONLY ABOUT THE SUMMIT

A common trajectory is a shift from:

- **Intrinsic motivation** (“I love the activity / learning feels good”) to
- **Controlled motivation** (“I have to prove myself / I can’t disappoint / I’ll be rejected if I fail”)

Self-Determination Theory (SDT) distinguishes motivation rooted in autonomy/interest from motivation driven by pressure, approval, or fear; when basic needs for autonomy, competence, and relatedness are undermined, well-being tends to drop even if performance remains high (Ryan & Deci, 2000). A neuroscience-informed SDT synthesis further describes how intrinsic motivation supports learning and wellness and how extrinsic control can narrow behavior and heighten stress (Di Domenico & Ryan, 2017).

In practice, youth often describe:

- Losing joy in sport/activity (it becomes “work”)
- Relief after success being brief, followed by immediate anxiety about the next evaluation

D.5 SHAME, SECRECY, AND FEAR OF BEING SEEN AS FAILING

When performance equals worth, failure more easily triggers **shame** (“something is wrong with me”) rather than healthy disappointment (“that didn’t go how I wanted”). Shame dynamics are widely discussed as self-focused evaluations that can intensify threat and avoidance, especially under social evaluation (Miceli & Castelfranchi, 2018).

Common downstream behaviors:

- **Hiding perceived failure:** lying about grades, avoiding feedback, deleting posts, not telling parents/coaches
- **Avoidance and withdrawal:** skipping class/practice, ghosting, disengaging from goals
- **Fragile self-worth:** highs after wins, crashes after losses

Longitudinal evidence linking shame-proneness to later risky behaviors supports the “threat → maladaptive coping” pathway (Stuewig et al., 2015). In youth and college populations, perfectionism is also consistently associated with internalizing symptoms, including anxiety and depression (Lunn et al., 2023), and socially prescribed perfectionism has been modeled as a pathway into depressive symptoms via interpersonal threat/hopelessness (Smith et al., 2018).

D.6 IDENTITY LOSS EVENTS: PERFORMANCE/ROLE COLLAPSE

In pressure-to-achieve environments, identity can become over-invested in a single performance domain (a sport, a program track, a scholarship pathway, a “top student” role). When that role collapses, through injury, selection loss, rejection, or a public mistake, the experience is not only disappointment; it can register as **identity loss**. For some youth and young adults, one loss can feel like “my life is over” because a single identity carried meaning, belonging, and future narrative.

Examples:

- Career-altering injury (ACL, concussion, medical disqualification)
- Being cut or losing a starting position
- Losing a scholarship / not being admitted / not making varsity
- A public mistake that becomes “the story” about who they are

Identity research in sport highlights that strong athletic identity can support belonging and persistence, but can also increase vulnerability in transitions or injury if it crowds out broader identity development (Chun et al., 2023; Schmid & colleagues, 2024). Related college evidence distinguishes *athlete identity* (sometimes protective) from “*jock*” *identity* (associated with elevated risk patterns, including suicide attempt odds in one college sample) (Miller & Hoffman, 2009).

At a population level, NCAA athlete mortality surveillance documents suicide as a meaningful contributor to athlete deaths (Rao et al., 2015), and a 20-year analysis found that suicide deaths among NCAA athletes increased over time as other causes of death declined (Whelan et al., 2024).

Boundary: This subsection focuses on performance- and role-based identity collapse within achievement systems (Cluster D). Broader identity strain driven by categorical labels, essentialism, and identity threat across domains is addressed in **Cluster G**.

D.7 WHY THIS BELONGS IN A CAUSES PAPER (PREVENTION-ORIENTED FRAMING)

Performance and striving are not inherently harmful. The risk rises when:

- Worth depends on winning.
- Mistakes are treated as identity threats.
- There is no path to repair or recalibrate.
- The person loses the joy of the climb.
- Protective structures (sleep, connection, purpose, embodied regulation) are displaced.

D.8 HOW THIS CLUSTER STACKS

- **With Cluster A (Connection collapse):** belonging erosion removes buffers and co-regulation.
- **With Cluster B (Digital life):** algorithmic comparison makes “never enough” feel constant.
- **With Cluster C (Public shaming):** public evaluation raises the cost of mistakes.
- **With Cluster F (School systems):** school evaluation visibility, ranking/placement cues, feedback norms, and repair pathways can intensify (or buffer) contingent-worth dynamics.
- **With Cluster H (Body inputs):** sleep loss increases reactivity and undermines recovery, tightening performance anxiety loops.
- **With Cluster J (Reward-loops):** shame after setbacks can increase relief-seeking; relief-seeking can increase avoidance and worsen performance.

Bottom line: Pressure becomes harmful when worth is contingent and mistakes are treated as identity threats. In that environment, striving shifts from growth to fear—and regulation, sleep, connection, and repair are displaced.



E: PARENTING SYSTEMS

Cause Cluster E: Parenting systems (role modeling, attachment, stress, and autonomy development)

Parenting systems are the daily family patterns that shape how stress is handled, how conflict is repaired, and how safety and autonomy are built at home. They matter because children borrow regulation from adults before they can reliably generate it on their own—so adult stress, presence, and repair become upstream inputs to youth well-being. This cluster is **not about blaming parents**; it focuses on system conditions that strain (or strengthen) protective caregiving.

E.1 WHAT CHANGED: ELEVATED PARENT STRESS

Parenting has always mattered, but the **stress context** around parenting is elevated. In *Stress in America* 2023, parents were more likely than other adults to report that financial strain increased in their household (46% vs. 34%), that money is a cause of fights in their family (58% vs. 30%), and that they feel consumed by worries about money (66% vs. 39%) (American Psychological Association, 2023). Globally, 44% of employees reported experiencing stress “a lot of the day yesterday” (Gallup, 2023), and in 2024 about **31%** of U.S. adults reported symptoms of anxiety disorder or depressive disorder (Centers for Disease Control and Prevention, 2024).

Why this matters: Many parents feel like they are “handling it” by pushing through their own stress while worrying about their kids. But adolescents absorb the *felt* emotional climate and copy the coping strategies they see. When adult stress stays high and unprocessed, it can reduce patience, presence, and repair and youth often adapt by becoming more vigilant, more avoidant, or more reliant on external regulation (screens, reassurance, or escape). In other words, supporting adult regulation is a high-leverage youth prevention move.

In practice, adolescents learn core beliefs and coping patterns by observation especially under stress:

- How adults regulate anger, anxiety, disappointment, and uncertainty.
- Whether joy and play are permitted (or treated as unproductive).
- Whether problems are discussed and repaired, or avoided and suppressed.
- Whether devices interrupt presence and relationships.

A broad developmental literature shows that **warmth, responsiveness, and secure relational support** are linked to better youth mental health and functioning, while harsh, inconsistent, or emotionally unavailable climates are associated with higher internalizing risk (e.g., depression/anxiety) across adolescence (Steinberg, 2001; Yap et al., 2014). This matters because youth coping habits formed at home can later be “amplified” by **algorithmic comparison** (Cluster B) or **public shaming threat** (Cluster C).

E.2 ATTACHMENT AND FELT SAFETY: THE “HOME BASE” EFFECT

Attachment isn’t only a childhood concept; it remains a protective system in adolescence. When youth experience caregivers as emotionally available and safe, they are more likely to develop **basic trust**, stable self-worth, and a greater capacity to self-regulate under stress (Allen et al., 2003; Yap et al., 2014). When felt safety is low—because of conflict, unpredictability, chronic criticism, or emotional absence—youth may become more threat-sensitive and more likely to seek regulation through external means (scrolling, compulsive checking, substances, avoidance), which can intersect with Clusters B and H (Allen et al., 2003; Rusu et al., 2025).

E.3 PARENT STRESS SPILLS INTO CHILD STRESS (EVEN WHEN NO ONE INTENDS IT)

When parents are chronically stressed—financial strain, workload, relational conflict, health burdens, or psychological distress—family systems often shift toward **reactivity** (more snapping, less patience) or **emotional flattening** (less engagement, less warmth). Both reduce co-regulation and can degrade youth regulation capacity over time. A recent meta-analysis synthesizing evidence across studies finds that **parental stress is robustly associated with poorer parent well-being and family functioning**, which are key pathways for child and adolescent outcomes (Rusu et al., 2025).

When caregiver stress is chronic, youth often experience less predictable co-regulation and repair at home—raising baseline vigilance and increasing reliance on external regulation (screens, reassurance, or escape).

E.4 OVERPROTECTION, CONTROL, AND “AUTONOMY DEBT”

In many families, a riskier world has led to tighter control—more monitoring, more intervention, fewer independent experiences. The intention is protection; the unintended outcome can be reduced mastery: fewer moments of *“I handled something hard and I’m okay.”* That can show up as:

- Lower frustration tolerance.
- Avoidance of discomfort.
- Higher sensitivity to mistakes (Cluster D).
- Increased reliance on external regulation (devices, reassurance, substances).

Evidence reviews on “helicopter parenting” commonly report associations with poorer well-being outcomes in youth and emerging adults, including higher anxiety and depressive symptoms, although effects vary by context and measurement (Vigdal & Brønnick, 2022). The mechanism is not “involvement is bad,” but rather **involvement that replaces autonomy-building**.

E.5 UNDER-ENGAGEMENT, ABSENCE, AND INSTABILITY (INCLUDING SINGLE-PARENT OVERLOAD)

At the other end is under-engagement: limited time, emotional availability, supervision, or stable presence—often driven by economic strain, shift work, single-parent load, family transitions, or caregiver mental health challenges. These pressures can intensify in single-parent households, especially under economic strain, when one adult is carrying a disproportionate share of supervision, emotional labor, and income stability demands (McLanahan & Sandefur, 1994; Federal Interagency Forum on Child and Family Statistics, 2024).

The best predictor is not family structure by itself, but whether youth experience:

- Consistent caring adults.
- Reliable boundaries and routines.
- Felt safety (“someone has my back”).
- Predictable connection.

When youth have fewer consistent, caring adults outside the home (extended family, mentors, coaches, neighbors), their overall support and supervision bandwidth can be thinner—especially during periods of family transition or caregiver overload. Research on father involvement and father absence has been linked to differences in some youth outcomes (e.g., delinquency and incarceration risk), though effects vary by context and should be interpreted as probabilistic risk patterns, not determinism for any individual family (Harper & McLanahan, 2004). More broadly, what appears most protective across family structures is reliable, warm adult connection combined with consistent routines, monitoring, and opportunities for healthy autonomy development.

These pressures are intensified by the economic instability that often follows family transitions, including sharp drops in income, longer work hours, and more frequent moves, all of which weaken routines and supervision. Across cultures and history, children have typically relied on networks of adults for stability and guidance; when these structures thin due to overload or instability, vulnerability to peer influence, online substitutes for belonging, and shame-driven withdrawal increases (Evans & Kim, 2013; Amato, 2005).

When these are missing, youth may be more vulnerable to peer influence, online belonging substitutes (Cluster A/B), and shame-driven withdrawal (Cluster C/D) (Yap et al., 2014; Rusu et al., 2025).

E.6 THE TECHNOLOGY MIRROR AT HOME: CO-PRESENT DISTRACTION AND PARENTAL “PHUBBING”

A major modern driver is **attention scarcity inside the home**: parents and youth are physically together, but attention is split. Research on parental phubbing (parents distracted by phones during interactions) links this pattern to poorer parent–child relationship quality and greater youth problematic phone use and emotional distress through family-process pathways (Liu et al., 2019; Yu et al., 2024).

Translation: if a young person experiences attention as fragile or competing with devices, they may (a) stop bringing emotions to adults, (b) escalate bids for attention, or (c) self-soothe with screens—feeding into Cluster B mechanisms like compulsive checking and sleep displacement.

E.7 PROTECTIVE STRUCTURE: WARMTH + BOUNDARIES + MONITORING (WITHOUT SHAME)

The most consistent “protective blend” in the literature is not permissive vs strict; it is **high warmth plus clear structure**—expectations, routines, supervision, and repair after conflict. Using CDC’s nationally representative Youth Risk Behavior Survey (YRBS) 2023 data, protective factors—including **high parental monitoring**—are associated with lower prevalence of multiple mental health and suicide risk indicators among high school students (Verlenden et al., 2024).

This connects directly to Cluster A: monitoring is not just rule enforcement; it can be a *signal of care and connection* when delivered with warmth and respect.

E.8 WHEN PARENTS ARE STRUGGLING: MENTAL HEALTH, SUBSTANCE USE, SUICIDAL BEHAVIOR

Some youth carry invisible burdens: parental depression, anxiety, substance misuse, or suicidal behavior. A recent systematic review / meta-analysis synthesizing evidence across large samples finds that parental mental health problems and suicidal behavior are associated with elevated adolescent suicidality risk, while also noting heterogeneity across studies (Bratu et al., 2025).

This is not determinism—many youth do well—but it underscores why family context matters in a causes paper: youth risk is shaped not only by what happens *to* them, but by what happens *around* them, especially in the home.

E.9 HOW THIS CLUSTER STACKS

- **With Cluster A (Connection collapse):** home stress and low attunement reduce felt safety, increasing withdrawal and loneliness.
- **With Cluster B (Digital life):** attention scarcity at home can push youth toward screens for regulation; screens then displace sleep and in-person repair.
- **With Cluster D (Pressure to achieve):** parental anxiety or over-control can intensify contingent worth and fear of mistakes.
- **With Cluster H (Body inputs):** household stress and late-night device norms degrade sleep, routines, and recovery.
- **With Cluster I (Chronic stress & ACEs):** instability, conflict, or caregiver distress increases baseline stress load and threat sensitivity.
- **With Cluster J (Reward-loops):** when felt safety is low, youth may rely more on fast relief coping (substances or compulsive escape).

Bottom line: Parenting shapes youth well-being through daily micro-inputs—modeling, felt safety, attention, warmth, and structure. In a high-pressure, high-tech environment, these inputs can either buffer youth against stacked risks (Clusters A–D, H) or intensify vulnerability when the system is strained.



F: SCHOOL SYSTEMS

Cause Cluster F: School systems, accountability signals, and resilience skill-building

School systems are daily developmental ecosystems shaping belonging, competence, coping norms, and access to supportive adults. They matter because school climates can either buffer stress through connection and skill-building or amplify it through humiliation threat and weak repair. This cluster focuses on system signals and practices—not individual student deficits.

F.1 WHAT CHANGED: SCHOOLS UNDER LOAD (TIME, COMPLEXITY, AND SIGNALS)

Schools have always shaped youth development, but the **load profile** has changed: more students carry higher baseline stress and distress indicators (Centers for Disease Control and Prevention, 2024); attention fragmentation and sleep loss are more common in daily routines (Office of the Surgeon General, 2023; Twenge, 2020); and accountability systems can unintentionally signal that performance metrics matter more than belonging, repair, and skill-building (Ryan & Deci, 2000; Deci et al., 1999). Together, these shifts can make school feel higher-stakes and less regulating.

Because youth spend a large portion of waking hours in school, school climate shapes belonging/safety, coping norms (how mistakes are treated), and access to protective adults.

Public health surveillance and education research increasingly treat school climate and connectedness as upstream determinants of youth health—not “extras” (Wilkins et al., 2023; Verlenden et al., 2024).

F.2 SCHOOL CONNECTEDNESS AND SAFETY AS CORE PROTECTIVE FACTORS

School connectedness—the belief that adults and peers at school care about a student, their well-being, and their success—is repeatedly associated with lower suicidal thoughts and behaviors.

- A systematic meta-analysis found school connectedness was significantly associated with reduced suicidal thoughts and behaviors across youth samples (Marraccini & Brier, 2017).
- National CDC analyses using YRBS 2023 data report that **high school connectedness is associated with lower prevalence of multiple mental health and suicide risk indicators** (Verlenden et al., 2024). CDC work also documents that connectedness relates to lower risk behaviors and adverse experiences broadly (Wilkins et al., 2023).

Belonging is measurable and protective. (Cluster A includes school connectedness as an example indicator of broader belonging erosion; Cluster F treats it as a core school-system lever.)

F.3 ACCOUNTABILITY CONVERSATION: SUPPORT + STANDARDS (MASTERY, FEEDBACK, AND REAL COMPETENCE)

This topic can be politicized; here it's framed in a skills-based way.

Support + standards builds competence. Youth develop resilience when they experience: *clear expectations, useful feedback, opportunities to improve, and the earned confidence of mastery*. Mastery learning models—where students receive formative feedback, targeted correctives, and then reassessment—have a long research history:

- Mastery learning programs show positive effects on student achievement in a large meta-analysis of controlled evaluations (Kulik, Kulik, & Bangert-Drowns, 1990).
- Mastery testing/retesting approaches have also shown positive effects on learning in a meta-analysis of comparative studies (Kulik & Kulik, 1987).
- Practical syntheses emphasize that “retries” work best when paired with **high-quality corrective instruction**, not simply unlimited attempts without coaching (Guskey, 2010).

Implication for retakes/flexible deadlines:

Flexibility can reduce anxiety and support learning when paired with **clear mastery standards, high-quality corrective instruction**, and opportunities to practice and improve (Kulik et al., 1990; Kulik & Kulik, 1987; Guskey, 2010). Without those supports, flexibility can unintentionally signal that outcomes matter more than preparation, weakening planning, follow-through, and competence-building for some students.

F.4 PARTICIPATION-ONLY AWARDS AND EXTERNAL VALIDATION: WHEN MOTIVATION SHIFTS FROM MASTERY TO APPROVAL

In this framework, recognition should not substitute for competence. Participation trophies and automatic praise can be well-intended, but when awards are routinely detached from effort, improvement, contribution, or mastery, they blur a core developmental signal: *progress is earned, and growth is possible*. Over time, this can leave students less practiced in persistence, feedback tolerance, and the satisfaction of genuine mastery.

Self-Determination Theory links durable motivation and well-being to autonomy, competence, and relatedness (Ryan & Deci, 2000; Di Domenico & Ryan, 2017). When environments over-emphasize external rewards and social approval, motivation can shift toward controlled performance (“I perform to be accepted”). A meta-analysis also shows that extrinsic rewards can undermine intrinsic motivation under specific conditions, especially when rewards feel controlling or replace competence feedback (Deci et al., 1999).

Practical translation for schools: Celebrate belonging and participation with *invitations* and *acknowledgments*, but reserve **awards** for signals that build competence: effort, improvement, helpfulness, teamwork, integrity, and skill growth. In practice, that means praising **process** (practice, grit, recovery after mistakes) more than status, and making “wins” visible as **earned progress** rather than automatic approval.

F.5 SCHOOL-SYSTEM LEVERS THAT CAN AMPLIFY (OR BUFFER) PERFORMANCE PRESSURE

Schools do not just reflect pressure; they also **signal what counts**. System choices—how grades are displayed, how ranking and placement operate, how feedback is delivered, and whether there is a credible path to **repair after mistakes**—can either intensify social-evaluative threat or support mastery and healthy striving. In this framework, F.5 focuses on **school-system levers** that shape the felt stakes of performance. **Boundary:** the broader performance-pressure mechanism (contingent worth, perfectionism, and outcome-identity fusion) is treated in **Cluster D**; categorical/label rigidity and identity threat (including stereotype threat) is treated in **Cluster G**.

What this looks like in youth life (school levers)

- Grade portals and constant visibility make evaluation feel continuous (students monitor scores daily and experience small dips as high-stakes signals).
- Ranking, tracking, and placement cues (honors/AP lanes, “top” lists, competitive awards) shift attention from learning to comparative status.
- Feedback norms become “gotcha” or punitive (public call-outs, sarcasm, or low guidance), increasing shame and reducing help-seeking after mistakes.
- There is no clear repair pathway after setbacks (students don’t know who to go to, how to recover credit, or how to reset expectations), so avoidance and disengagement become more likely.
- Labels become sticky within the system (“gifted,” “remedial,” “behavior problem,” “IEP kid”), shaping teacher expectations and peer identity in ways that can narrow self-concept (see Cluster G).

F.6 DISCIPLINE CLIMATE AND “REPAIR”: WHEN ACCOUNTABILITY BECOMES HUMILIATION OR EXCLUSION

Restorative approaches can reduce harm from punitive discipline, but outcomes depend on implementation quality. Experimental evidence includes a cluster randomized trial of restorative practices in K–12 schools (Huang et al., 2023). CDC guidance also frames restorative practices as one option to build connectedness and safer climates—emphasizing **belonging + accountability + repair**, not “no standards” (Centers for Disease Control and Prevention, 2025; Verlenden et al., 2024).

F.7 HOW THIS CLUSTER STACKS

- **With Cluster A (Connection collapse):** school belonging and trusted adults can buffer loneliness; weak connectedness amplifies it.
- **With Cluster B (Digital life):** attention fragmentation and late-night use can degrade learning and increase school stress; school norms can protect sleep and focus.
- **With Cluster C (Public shaming):** humiliation dynamics (online or in-school) raise threat and avoidance; repair pathways reduce spillover into shame and withdrawal.
- **With Cluster D (Pressure to achieve):** grading, ranking, and evaluation cultures can intensify contingent worth or support mastery and healthy striving.

- **With Cluster E (Parenting systems):** home stress affects readiness to learn; strong school support can add protective adults and structure when home bandwidth is thin.
- **With Clusters H/J (Body inputs + Reward-loops):** fatigue and coping loops reduce school functioning; school schedules and supports can either worsen or buffer the cycle.

Bottom line: When schools lack a credible path to repair after mistakes—or when discipline becomes public shame or chronic exclusion—youth experience higher threat, lower belonging, and weaker skill-building.



G: IDENTITY STRAIN

Cause Cluster G: Identity (strain, labeling, and reduced self-concept flexibility)

Identity strain refers to risk that rises when identity becomes rigid, over-salient, or over-essentialized—treated as fixed “what I am” rather than one part of a developing self (Branje, 2022; Haslam et al., 2008). It matters because adolescence and emerging adulthood are periods of identity development, and research links identity coherence versus confusion/distress to differences in functioning and vulnerability (Branje, 2022). This cluster focuses on **categorical identity dynamics** (labels, essentialist thinking, identity salience/threat, and reduced self-concept flexibility) as described in the social-categorization and essentialism literatures (Lieberman et al., 2017; Haslam et al., 2008) and related youth evidence on self-labeling and self-stigma (Moses, 2009). **Boundary:** achievement-based contingent self-worth and performance-pressure systems are addressed in Cluster D.

G.1 WHAT CHANGED: IDENTITY UNDER CONSTANT VISIBILITY

Identity development is not new, but the **environment** has shifted: youth form identity under higher visibility, faster feedback, and more public categorization. Digital life can make labels feel more permanent and more performative, and polarization can make disagreement feel higher-stakes. The result is more pressure for identity certainty and fewer safe spaces for exploration and repair.

Adolescence and emerging adulthood are core periods for identity development, building a coherent sense of “who I am,” “where I belong,” and “what matters.” Reviews consistently link a more coherent identity with better functioning, while identity confusion/distress is associated with greater vulnerability. (Branje, 2022)

Note: Social media adds a high-visibility context for identity development—exploration, commitment, and self-concept clarity occur under constant feedback, comparison, and judgment (Avci et al., 2024).

G.2 WHEN IDENTITY BECOMES “CATEGORICAL” (EFFICIENCY WITH UNINTENDED COST)

Categorization is a normal feature of human cognition and can support belonging (finding “people like me”) and access to tailored supports. The concern here is not identity awareness; it is **rigid, high-stakes categorization**—when everyday interactions make a single label feel like the main explanation for a person, and when social consequences for “getting it wrong” are high.

Humans naturally use categories to navigate complexity, but social categorization can also exaggerate differences and amplify stereotyping and intergroup bias, especially when categories are treated as highly diagnostic of “who someone really is.” (Lieberman et al., 2017)

When any single category (demographic, social, or role-based) becomes the *primary* lens in everyday interactions, youth can experience unintended side effects, especially in high-visibility or high-conflict settings:

- **Narrowed self-concept:** “This is what matters most about me,” reducing flexibility to explore strengths, interests, and growth beyond the label.
- **More rigid social sorting:** friendship groups and peer “lanes” can become less permeable, reducing cross-cutting relationships that often buffer loneliness and polarization.
- **Us–them threat framing:** differences are more easily interpreted as danger or distance rather than curiosity, which can heighten vigilance and conflict sensitivity.

This is **not** a claim that diversity or inclusion work is harmful by default. A major research synthesis on diversity initiatives concludes effects depend heavily on design and context and can include both intended benefits and unintended backfire/spillover effects. (Leslie & Wang, 2024)

When categories are treated as highly diagnostic of “who someone really is,” disagreement becomes higher-stakes and harder to repair.

G.3 ESSENTIALISM RISK: WHEN LABELS START TO FEEL LIKE DESTINY

Psychological essentialism is the tendency to view categories as reflecting deep, fixed “essences.” This style of thinking is associated with stronger stereotyping and prejudice. (Haslam et al., 2008; Prentice & Miller, 2007)

Empirical work also shows that heightened essentialist beliefs can increase prejudice by strengthening endorsement of social hierarchies. (Mandalaywala et al., 2018)

Youth translation: When labels are framed (or experienced) as fixed and defining, youth may feel:

- “People will always see me this way.”
- “If I change, I’ll be rejected.”
- “I have to perform my identity correctly.”

G.4 THE “LABEL AS BOX” PROBLEM: RIGIDITY, STIGMA, AND REDUCED AGENCY

Labels can reduce shame and improve access to support, but they can also increase **self-stigma** or reduce perceived agency in some contexts.

- In adolescents receiving mental health services, **self-labeling** with psychiatric terms was associated with higher self-stigma and higher depression indicators (Moses, 2009).
- Identity rigidity is closely related to **low self-concept clarity**, which has been linked to lower well-being and meaning in life; one large adolescent study found self-concept clarity was positively associated with meaning in life (Yang et al., 2025).

Real-world “this is what it looks like” examples:

- Feeling forced into a simplified “box” based on a high-salience category (e.g., political identity, sexual orientation, race/ethnicity), and then monitoring speech/appearance to avoid social punishment.
- Hiding interests that don’t match a group label.
- Avoiding cross-group friendships due to fear of social punishment.
- Feeling pressure to “represent” an entire group.
- Interpreting disagreement as rejection of the self (identity entanglement).

Identity rigidity can intensify shame-based interpretations of failure: “If I’m wrong, I’m invalid.”

G.5 IDENTITY SALIENCE AND PERFORMANCE THREAT (STEREOTYPE THREAT)

Boundary (school context): When identity becomes salient in evaluative settings, risk can be shaped both by categorical/label dynamics (this cluster) and by performance-pressure systems (Cluster D). For school-system design choices that influence these dynamics (e.g., tracking/placement, feedback norms, and repair pathways), see **Cluster F**.

When a stigmatized identity is made salient in evaluative settings, performance can be impaired—an effect widely studied as **stereotype threat**. (Schmader et al., 2008)

Work also suggests that reminding people of other valued identities (“multiple identity” or “achieved identity” cues) can reduce threat effects in performance contexts. (McGlone & Aronson, 2006; Mocevic & Gniewosz, 2025)

Concrete examples: Identity salience can be triggered in subtle ways, being the “only one” in an advanced class, checking a demographic box immediately before an exam, hearing that a test is “diagnostic of intelligence,” or feeling pressure to represent an entire group during public performance (Schmader et al., 2008). In these moments, attention splits: part stays on the task and part monitors the threat of confirming a stereotype, which can impair performance. The threat is not the task itself—it’s the added mental load of worrying that one mistake will “prove” a stereotype.

Research suggests this burden can be reduced by prompting students to hold multiple identities at once (friend, teammate, creator, helper) or emphasizing an achieved identity (e.g., “scientist-in-training”) can reduce threat effects and improve engagement (McGlone & Aronson, 2006; Mocevic & Gniewosz, 2025).

G.6 POLARIZATION VS. IDENTITY COMPLEXITY (A PROTECTIVE LEVER)

A key protective factor is **identity complexity**, holding multiple, non-overlapping identities (friend, learner, athlete, creator, helper, sibling, neighbor, etc.). Higher identity complexity is associated with greater tolerance and more positive outgroup attitudes. (Roccas & Brewer, 2002)

In diverse adolescent settings, cross-group friendships and experiences can support identity complexity. (Knifsend & Juvonen, 2014)

Separately, social-belonging interventions show that strengthening belonging security, especially for students carrying “do I fit here?” uncertainty can improve long-term academic and health-related outcomes. (Walton & Cohen, 2011; Brady et al., 2020)

Concrete examples: Cross-group friendships in diverse settings—teams, clubs, shared projects—help build identity complexity over time (Knifsend & Juvonen, 2014). Belonging interventions can also reduce “do I fit here?” uncertainty and improve longer-term academic and health outcomes (Walton & Cohen, 2011; Brady et al., 2020).

G.7 MESSAGING GUIDANCE (NONPOLITICAL, WHOLE-PERSON FRAMING)

This is a **messaging and education** note for parents, educators, and youth-serving leaders. To address identity-related risk **without** turning into a political argument, use language that expands rather than collapses identity—reinforcing whole-person dignity, multiple identities, and repair.

- **Whole-person identity:** “You are more than a label.”
- **Shared humanity + specific dignity:** Honor differences without making them walls.
- **Multiple identities (explicitly named):** “You are a friend, a learner, a creator, a helper—plus your story.”

G.8 HOW THIS CLUSTER STACKS

- **With Cluster B (Digital life):** visibility, comparison, and feedback loops intensify identity performance and self-monitoring.
- **With Cluster C (Public shaming):** when labels are high-stakes, disagreement and mistakes feel more dangerous and harder to repair.
- **With Cluster A (Connection collapse):** rigid sorting reduces cross-cutting friendships and can deepen loneliness or “only my group is safe” beliefs.
- **With Cluster D (Pressure to achieve):** worth collapses into one salient identity (achievement, role, or label), increasing shame after setbacks.
- **With Cluster K (Public division & negativity):** polarization rewards categorical thinking and increases threat sensitivity.
- **With Cluster L (Purpose drought):** meaning scarcity increases reliance on identity substitutes (status, group belonging, online persona).

Bottom line: Identity becomes protective when it **expands belonging and possibility**. It becomes a driver of decline when it **collapses complexity into rigid categories**, amplifies threat, or trains youth to locate worth in a single salient identity—especially under constant digital judgment. (Avci et al., 2024; Branje, 2022; Haslam et al., 2008)



H: BODY INPUTS

Cause Cluster H: Body inputs that degrade regulation (sleep, movement, nutrition, metabolic health)

Body inputs are upstream physiological conditions that shape regulation capacity: sleep, movement, nutrition quality, and metabolic recovery. They matter because when recovery is degraded, baseline energy falls, impulse control weakens, and other pressures hit harder. This cluster treats body inputs as foundational buffers—not as a “mind-only” add-on.

H.1 WHAT CHANGED: MODERN ROUTINES DEGRADE SLEEP

The clearest body-input shift relevant to youth well-being is sleep: insufficient sleep and delayed bedtimes are widely linked to late-night screen exposure and high-stimulation routines (Office of the Surgeon General, 2023; Twenge, 2020).

H.2 SLEEP LOSS AND CIRCADIAN DISRUPTION

Sleep is a **keystone regulator** for mood stability, anxiety sensitivity, impulse control, learning, and social-emotional functioning. When sleep is compressed or shifted later, regulation costs rise: reactivity increases, recovery weakens, attention narrows, and coping becomes more impulsive. Common drivers include early start times, workload demands, stress, and always-available digital engagement (Office of the Surgeon General, 2023; Twenge, 2020).

H.3 MOVEMENT DECLINE AND SEDENTARY TIME

Reduced physical activity and higher sedentary time can worsen well-being through multiple channels: lost stress relief, reduced exposure to “natural” reward (mastery/play), fewer in-person social interactions, and metabolic/inflammatory shifts that can influence mood. A systematic review and meta-analysis found physical activity is associated with better mental health outcomes in children and adolescents, while sedentary behavior shows the opposite pattern (Rodríguez-Ayllón et al., 2019). A separate systematic review reported associations between sedentary behavior and mental health indicators among adolescents (Hoare et al., 2016).

Movement decline often co-occurs with sleep disruption and heavy digital use, creating a “low-energy / high-stimulation” loop that increases dysregulation risk.

H.4 NUTRITION QUALITY AND ULTRA-PROCESSED FOODS (UPFS)

Diet patterns have shifted toward **ultra-processed foods (UPFs)**, products engineered for convenience and hyper-palatability and often high in refined starches/sugars, industrial fats, and additives. Evidence is still strongest in observational research (so it does not prove causality), but converges enough to treat nutrition quality as a plausible upstream contributor to well-being decline:

- A systematic review and meta-analysis linked higher UPF consumption with higher odds of depressive and anxiety symptoms (Lane et al., 2022).
- An umbrella review found greater UPF exposure associated with elevated risk across multiple adverse outcomes, including mental health outcomes (Lane et al., 2024).
- A systematic review focused on youth concluded that diet quality and dietary intake show meaningful associations with depressive symptoms in children and adolescents across observational studies (Wang et al., 2022).

Lower nutrition quality can amplify stress vulnerability and mood instability, while also reinforcing reward-seeking patterns and fatigue-driven disengagement.

H.5 CHEMICAL EXPOSURES “NOT MEANT FOR CONSUMPTION” (PESTICIDES, ENDOCRINE DISRUPTORS) (EMERGING BUT RELEVANT)

Because this area can easily drift into fear-based claims, the most research-grounded framing is: **environmental exposures are plausible risk amplifiers** that may contribute to mental health vulnerability in some populations, with causality and youth-specific pathways still actively studied.

Important boundary: This section does not claim chemical exposures are a primary driver of the youth well-being decline; it flags them as potential **risk amplifiers** with youth-specific causal evidence still limited and evolving.

- A recent meta-analysis found pesticide exposure was associated with higher risk of depression, anxiety, and suicide-related outcomes in agricultural populations, while calling for more longitudinal evidence (Kham-Ai et al., 2026).
- Broader scientific work on endocrine-disrupting chemicals (EDCs) describes mechanisms (e.g., hormonal and neurodevelopmental disruption) and highlights the public health importance of these exposures, though youth-specific causal conclusions for mental health remain limited and heterogeneous (Kassotis et al., 2020).

Chemical exposures are best treated as one potential layer that can compound with sleep loss, poor diet, chronic stress, and weak protective structure.

H.6 METABOLIC HEALTH AND INFLAMMATION AS “SILENT AMPLIFIERS”

Metabolic strain and low-grade inflammation are not “mind-only” issues—they can influence energy, sleep quality, and stress reactivity, which in turn shape mood and coping capacity. As youth and emerging adults experience more disrupted sleep, less movement, and more UPF-heavy diets, it becomes more plausible that downstream metabolic/inflammatory pathways contribute to dysregulation and low mood in vulnerable individuals (Lane et al., 2024; Rodríguez-Ayllón et al., 2019; Wang et al., 2022).

Metabolic health can be a background amplifier that makes other stressors hit harder.

H.7 HOW THIS CLUSTER STACKS

- **With Cluster B (Digital life):** late-night use and high-arousal content displace sleep and weaken recovery.
- **With Cluster D (Pressure to achieve):** striving often trades sleep and movement for output; fatigue then raises anxiety and reactivity.
- **With Cluster A (Connection collapse):** loneliness increases arousal and rumination; poor sleep then worsens mood and social withdrawal.
- **With Cluster C (Public shaming):** social-evaluative threat drives hyperarousal and rumination, disrupting sleep and body regulation.
- **With Cluster I (Chronic stress & ACEs):** stress disrupts sleep and metabolic health; depleted recovery increases stress sensitivity.
- **With Cluster J (Reward-loops):** fatigue and dysregulation increase relief-seeking; relief behaviors then further disrupt sleep and routines.

Bottom line: Body inputs are not “secondary” to mental health. Sleep, movement, and nutrition quality shape baseline energy, impulse control, and recovery—so when they degrade, other pressures (comparison, social threat, performance stress) hit harder.



I: CHRONIC STRESS & ACES

Cause Cluster I: Trauma, chronic stress, and adverse childhood experiences (ACEs)

Chronic stress and ACE exposure are upstream drivers that load the regulation system over time. They matter because repeated stress can produce a more dysregulated nervous system—quicker to activate, slower to recover—making anxiety, depression, irritability, and risky coping more likely (McEwen, 1998; Shonkoff et al., 2012). This cluster is about cumulative load and buffers, not trauma comparison or determinism.

I.1 WHAT CHANGED: STRESS LOAD + FEWER BUFFERS

ACEs are not new, but **stress exposure and buffering conditions** can be strained when families and communities face cumulative risk factors (Evans et al., 2013; Hughes et al., 2017; Shonkoff et al., 2012), including:

- Economic strain, housing instability, food insecurity, and caregiver overload (Evans et al., 2013; Shonkoff et al., 2012).
- Conflict, separation, incarceration, or caregiver mental illness/substance misuse (Hughes et al., 2017; Shonkoff et al., 2012).
- Abuse and neglect (physical, emotional, or sexual) and witnessing domestic violence (Felitti et al., 1998; Hughes et al., 2017).
- Caregiver suicidal behavior or overdose, and related household disruption and instability (Felitti et al., 1998; Hughes et al., 2017; Shonkoff et al., 2012).
- Exposure to violence, bullying, discrimination, or chronically unsafe environments (Centers for Disease Control and Prevention, 2024; Hughes et al., 2017).
- Fewer stable protective adults and less time in supportive community structures (Shonkoff et al., 2012; Evans et al., 2013).

Importantly, youth don't need a single catastrophic trauma to be affected. **Chronic, repeated stressors**—especially when paired with low perceived safety and low support—can accumulate into “high allostatic load” (the wear-and-tear cost of constant adaptation) (McEwen, 1998; Shonkoff et al., 2012).

I.2 EVIDENCE: ACES PREDICT DOWNSTREAM RISK

The ACE framework is supported by large-scale and meta-analytic research:

- The original ACE study reported a **graded, dose-response relationship** between ACE count and later health risk across adulthood (Felitti et al., 1998).

- A landmark systematic review/meta-analysis found exposure to **multiple ACEs** is associated with elevated risk for numerous adverse outcomes across the life course, including mental health and behavioral outcomes (Hughes et al., 2017).
- More recent adolescent-specific work highlights how common adversity exposure is. In a 2024 national study, 80.5% of adolescents reported at least one ACE and 22.4% reported four or more ACEs (Liu et al., 2024).
- CDC’s 2023 YRBS supplemental analyses describe ACE exposures among U.S. high school students and report associations between ACEs and multiple health conditions and risk behaviors (David-Ferdon et al., 2024).

Important nuance: ACEs are **risk**, not destiny. Resilience is more likely when youth have stable support, belonging, and skilled adults around them (Shonkoff et al., 2012).

I.3 MECHANISMS (CHRONIC STRESS IMPACT ON THE BRAIN + BODY)

Chronic stress is not just “emotional.” It is a **whole-person regulation load** affecting mind, body, and heart.

Useful shorthand: chronic stress can produce a more **dysregulated nervous system**—one that is quicker to activate, slower to recover, and more likely to default to protection (hypervigilance, shutdown, or numbing). When regulation improves at this level, many downstream symptoms become easier to shift.

1) Threat system sensitization (always-on danger scanning)

When stress is chronic, the brain becomes more tuned to threat cues—tone of voice, rejection signals, conflict, uncertainty. This can show up as anxiety, irritability, anger, or social withdrawal. (Shonkoff et al., 2012)

2) Emotion regulation disruption (harder to downshift)

Youth may have more difficulty calming after activation. Minor stressors can feel like major threats because the system is already running hot. (Shonkoff et al., 2012)

3) Allostatic load and body strain (sleep, inflammation, metabolic shifts)

McEwen’s allostatic load model describes how repeated stress activation can create wear and tear across systems—sleep disruption, energy problems, immune/inflammatory shifts, and metabolic changes—making mood regulation harder and fatigue more common. (McEwen, 1998)

4) Meaning and relational effects (trust, belonging, identity)

When stress is tied to betrayal, instability, or ongoing fear, youth may develop protective beliefs: “*People aren’t safe*,” “*I’m on my own*,” “*I can’t show weakness*.” That erodes trust and belonging and increases sensitivity to social threat (Shonkoff et al., 2012).

5) Risk behavior pathways (coping through relief)

Substance use, self-harm, disordered eating, or compulsive scrolling can function as short-term regulation tools—attempts to reduce arousal, numb pain, or create control. Over time, these strategies often worsen mood and increase risk (Hughes et al., 2017).

I.4 REAL-WORLD EXAMPLES (WHAT “CHRONIC STRESS” LOOKS LIKE IN A TEEN’S LIFE)

- **The “always on edge” household:** A parent is overwhelmed or depressed, conflict is frequent, and the teen stays in their room to avoid triggering arguments. They sleep lightly, keep headphones in, and feel guilty for needing anything.
- **Emotional abuse by a caregiver (known adult):** A parent or caregiver uses chronic criticism, humiliation, threats, or unpredictable anger to control the household. The teen learns to self-silence, scans for mood shifts, and feels responsible for keeping the peace.
- **Dating control or intimidation (known peer):** A boyfriend/girlfriend monitors messages, threatens social retaliation, isolates the teen from friends, or uses intimidation to maintain control. The relationship becomes a constant stressor, and the teen feels trapped and ashamed to tell adults.
- **Economic instability:** A teen moves between relatives’ homes or changes schools repeatedly. They stop joining clubs/teams because nothing feels stable enough to invest in.
- **Caregiver incarceration:** A parent is jailed or repeatedly detained. The teen may take on adult responsibilities, experience unstable housing or transportation, and carry chronic uncertainty about what happens next.
- **Chronic social threat:** Ongoing bullying, harassment, or home/school unsafety makes the nervous system expect humiliation or attack—so the teen avoids attention, avoids risk, and lives in self-protection.
- **Stacked stress + no recovery:** Late-night scrolling to numb → sleep loss → worse emotion regulation → more conflict at home/school → more scrolling → the spiral tightens.

I.5 HOW THIS CLUSTER STACKS

- **With Cluster H (Body inputs):** chronic stress worsens sleep; poor sleep increases stress reactivity.
- **With Cluster A (Connection collapse):** stress reduces trust and increases withdrawal; isolation increases vulnerability.
- **With Cluster C (Public shaming):** a sensitized nervous system experiences public criticism or ostracism as more dangerous.
- **With Cluster J (Reward-loops):** coping becomes relief-seeking; relief-seeking can become dependence.

Bottom line: Chronic stress and ACE exposure are upstream drivers because they reduce regulation capacity at the root—shaping attention, mood stability, sleep, trust, and coping. Prevention becomes more realistic when communities reduce stress load where possible and increase buffers: stable adults, belonging, repair, and skills for regulation (Hughes et al., 2017; Shonkoff et al., 2012).



J: REWARD-LOOPS

Cause Cluster J: Reward-loop exposures (alcohol, nicotine/vaping, cannabis, pornography, gaming)

Reward-loops are high-availability coping exposures that can reduce discomfort short-term while worsening regulation over time. They matter because short-cycle relief often becomes a long-cycle cost (sleep disruption, avoidance, shame, and weaker real-world coping). This cluster is framed without moral judgment; it focuses on how relief-seeking can become an accelerator once stress and disconnection are present.

J.1 WHAT CHANGED: HIGH-AVAILABILITY COPING

Reward-loop exposures are not new, but many youth now have **lower-friction access** to “fast relief” options—especially nicotine/vaping and high-intensity digital escape (gaming, pornography) that are always available and easy to repeat. In a high-stress environment, that makes short-term regulation substitutes easier to reach, and more likely to become a default coping pattern (Office of the Surgeon General, 2023).

Across substances and behavioral reward loops, several patterns repeat:

- **Short-cycle relief → long-cycle cost:** Relief arrives quickly (numbing, soothing, stimulation, escape). Costs show up later (sleep disruption, mood volatility, lower motivation, shame, withdrawal, irritability, and reduced stress tolerance).
- **Tolerance and escalation:** Over time, the same exposure often provides less relief, increasing frequency, intensity, or novelty seeking—especially when underlying stress remains.
- **Displacement:** Time and energy are pulled away from protective buffers: **sleep, movement, in-person connection, and skill-building.**
- **Bidirectional entanglement:** Distress can increase use, and use can increase distress—creating a self-reinforcing loop (Ye et al., 2023).

Make it real (what this looks like):

A student feels behind → can’t downshift → scrolls/games/porn/drinks to “shut off” → goes to bed late → feels worse the next day → avoids → repeats. The exposure isn’t the root cause, but it becomes the **engine** that keeps the stack from unwinding.

J.2 ALCOHOL: NORMALIZED COPING + HIGH-RISK COLLEGE ENVIRONMENT

Alcohol remains a major exposure in college and emerging-adult contexts because it is socially reinforced, widely available, and often used to manage stress and social anxiety. NIAAA emphasizes harms of college drinking—especially binge drinking—and notes links to serious health/safety outcomes and longer-term risks,

including increased risk for mental health problems and suicide and alcohol use disorder (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2020; NIAAA, n.d.).

Cause pathway: Alcohol disrupts sleep and emotional stability, increases impulsivity, and can intensify next-day anxiety (“hangxiety”). That combination can drive avoidance and repeated use—especially when the person already carries pressure, loneliness, or chronic stress.

J.3 NICOTINE AND VAPING

Youth nicotine exposure increasingly occurs via e-cigarettes. A systematic review found adolescent and young adult e-cigarette use is associated with greater mental health problems across several domains, while noting that much of the evidence is cross-sectional and directionality remains uncertain (Becker et al., 2021).

Cause pathway: Nicotine can feel like “focus” or “calm” in the moment, but it also reinforces an **arousal/withdrawal loop** that can worsen irritability and anxiety—especially when combined with sleep loss and high baseline stress.

J.4 CANNABIS: DEVELOPMENTAL VULNERABILITY AND LATER RISK

A large systematic review and meta-analysis found adolescent cannabis use was associated with increased risk of depression and suicidality in young adulthood (Gobbi et al., 2019).

Cause pathway: Cannabis may be used to downshift stress in the short term, while contributing to motivational disruption, sleep changes, and emotional blunting in some users—particularly when use becomes frequent or begins early (Gobbi et al., 2019). When a person is already dysregulated, cannabis can become a “do not feel” tool that crowds out skill-building and connection.

J.5 PORNOGRAPHY AND PROBLEMATIC USE

Pornography exposure is widespread; the more clinically relevant risk signal is often **problematic pornography use (PPU)**—use that becomes compulsive, distressing, and interfering. In university samples, compulsive/problematic pornography use has been linked with poorer mental health indicators (Camilleri et al., 2021). A systematic review synthesizing evidence on PPU and mental health also reports consistent associations between PPU and mental health difficulties across included studies, while emphasizing heterogeneity and limitations in the evidence base (Vieira & Griffiths, 2024).

In adolescent samples, pornography use has been examined in relation to poor mental health indicators in repeated cross-sectional surveys of Swedish high school seniors (average age ~18), contributing to the evidence base on how pornography use intersects with distress—though causality remains complex (Svedin et al., 2023).

Cause pathway (common loop youth describe):

Stress/anxiety/loneliness → pornography as quick relief → secrecy + shame → isolation → escalation → lower relationship confidence and fewer real-world intimacy/repair skills practiced.

J.6 GAMING AND COMPULSIVE INTERNET USE

Behavioral reward loops are increasingly relevant because they are **always available**, socially normalized, and highly reinforcing. A meta-analysis in adolescents found a **bidirectional relationship** between internet

addiction and depression: depression increases risk of internet addiction and internet addiction increases risk of depression, with the IA → depression pathway appearing stronger in pooled estimates (Ye et al., 2023).

Gaming disorder is now recognized by the World Health Organization in ICD-11 as a pattern of gaming behavior characterized by impaired control, increasing priority given to gaming over other activities, and continuation/escalation despite negative consequences (World Health Organization, 2020). A systematic review and meta-analysis estimates the burden/prevalence of gaming disorder among adolescents and frames it as a meaningful public health concern (Satapathy et al., 2024).

Cause pathway: Gaming/internet escape reduces distress short-term while displacing sleep, movement, and offline relationships. Distress then increases (fatigue, avoidance, conflict, falling behind), strengthening the drive to escape—tightening the loop (Ye et al., 2023).

J.7 PRACTICAL NOTE FOR MESSAGING (COMPASSIONATE REALISM)

This cluster lands best when it is framed without shame:

- These exposures often start as **coping** (a nervous system trying to regulate).
- The goal is **not moral judgment**—it’s restoring buffers: sleep, belonging, movement, meaning, and practical regulation skills.
- Reduce upstream load, and the pull toward relief-seeking loops often decreases.

J.8 HOW THIS CLUSTER STACKS

- **With Cluster I (Chronic stress & ACEs):** reward-loop behaviors often function as fast relief for high stress load, and can then increase volatility and dependence risk.
- **With Cluster H (Body inputs):** substances and late-night escape behaviors disrupt sleep and recovery; fatigue then increases cravings and impulsivity.
- **With Cluster A (Connection collapse):** isolation increases reliance on private, always-available coping; shame and withdrawal then further reduce real-world support.
- **With Cluster D (Pressure to achieve):** performance anxiety and contingent worth increase demand for numbing or stimulation, especially after setbacks.
- **With Cluster B (Digital life):** platform design can amplify compulsive engagement (scrolling, gaming, pornography) and normalize “escape” as a default regulation tool.
- **With Cluster C/L (Public shaming + Purpose drought):** shame and meaninglessness increase relief-seeking; relief-seeking can deepen shame and reduce purpose-building behaviors.

Bottom line: Reward-loop exposures are best understood as fast, available regulation substitutes. They can briefly reduce distress, but they also disrupt sleep, increase avoidance, and weaken real-world coping and connection—so the underlying stack becomes harder to unwind.



K: PUBLIC DIVISION & NEGATIVITY

Cause Cluster K: Public division, negativity saturation, and loss of shared meaning

Public division and negativity refers to a high-conflict information climate where crisis, outrage, and “us vs. them” cues are frequently present. It matters because persistent threat cues and hopelessness signals can keep youth stress systems activated and reduce agency. This cluster is not about taking political sides; it focuses on developmental impacts of conflict saturation.

K.1 WHAT CHANGED: ALWAYS ON

Youth and young adults are growing up inside a high-frequency information environment where conflict, crisis, and outrage are always available and often amplified by engagement-optimized systems (Office of the Surgeon General, 2023). Many families and communities also describe a more visibly polarized public climate and less shared narrative about what is true, what is good, and what the future holds. National U.S. adolescent data suggest internalizing trends have diverged by adolescents’ political beliefs over time, consistent with the idea that politicized climate can interact with stress and identity processes (Gimbrone et al., 2022).

K.2 MECHANISMS (HOW NEGATIVITY AND DIVISION DEGRADE WELL-BEING)

This cluster works through several predictable pathways:

- **Chronic social-threat activation:** Repeated exposure to conflict cues (hostility, instability, “us vs. them”) keeps the nervous system in a higher-alert state, increasing anxiety vulnerability and emotional reactivity (Office of the Surgeon General, 2023).
- **Learned helplessness / low agency:** When feeds emphasize problems without pathways to action, youth can internalize “nothing I do matters,” a known precursor pattern for depressive thinking (Office of the Surgeon General, 2023).
- **Vicarious distress loops:** Large-scale events can be experienced secondhand through media. Longitudinal evidence suggests trauma-related media exposure can fuel a cycle of distress—higher distress predicts more media consumption, which predicts more distress with subsequent events (Thompson et al., 2019).
- **Doomscrolling as a behavioral pattern:** Doomscrolling is not just “watching the news”—it reflects compulsive negative information consumption. Doomscrolling has been linked to psychological distress and lower well-being indicators in scale development and validation work (Satici et al., 2023).
- **Hope erosion and future-collapse:** When young people’s future thinking becomes more negative (hopelessness, low optimism), risk rises. A longitudinal systematic review/meta-analysis found

negative future-related thinking predicts later depressive symptoms in adolescents (and depression also predicts later negative future thinking), consistent with a bidirectional “downward spiral” model (Tang et al., 2024).

K.3 WHAT THIS LOOKS LIKE IN YOUTH LIFE

- Check phone before school → see violent clips, polarized comments, “the world is falling apart,” and peers arguing → enter class already activated.
- Feel pressure to have a “take” on every crisis → fear social punishment for saying the wrong thing → become hypervigilant or withdraw.
- Group chat turns into political conflict → friendships feel conditional → scan for threat (“who’s safe?”) instead of building connection.
- Scroll late at night “to stay informed” → emotional load ramps up → sleep gets compressed → feel more anxious and avoidant the next day → repeat.

K.4 HOW THIS CLUSTER STACKS

- **With Cluster B (Digital life):** algorithms can concentrate high-arousal conflict content, increasing exposure dose and vigilance.
- **With Cluster H (Body inputs):** late-night crisis consumption raises arousal and compresses sleep, weakening next-day regulation.
- **With Cluster A (Connection collapse):** polarization climates reduce trust and make cross-group connection feel risky.
- **With Cluster C (Public shaming):** high-conflict climates increase fear of saying the wrong thing and raise reputational threat.
- **With Cluster J (Reward-loops):** helplessness and threat load increase the appeal of fast relief behaviors and compulsive escape.
- **With Cluster M (AI as amplifier):** algorithmic personalization can increase the speed and intensity of negativity exposure and misinformation.

Bottom line: This cluster isn’t about “which side is right.” It’s about the developmental impact of growing up in a high-conflict, high-uncertainty, high-exposure information environment—where threat cues are frequent, attention is monetized, and hope can erode through repetition.



L: PURPOSE DROUGHT

Cause Cluster L: Purpose drought and “meaninglessness” (spiritual, existential, and community-level)

Purpose drought is a loss of stable meaning, contribution, and “why” structures that help youth absorb stress and sustain hope. It matters because when meaning is thin, young people often default to substitutes (status chasing, consumption, stimulation, escapism) and other pressures feel heavier. This cluster is not spiritual prescription; it focuses on protective contribution pathways and developmental “neededness.”

L.1 WHAT CHANGED: ROLES FOR CONTRIBUTION

Many youth and young adults are growing up with fewer stable “meaning containers”—consistent community roles, multigenerational ties, and beyond-the-self commitments that historically helped people interpret setbacks, regulate stress, and maintain hope. National civic-life data show that U.S. formal volunteering declined across the 2000s and 2010s (U.S. Census Bureau, 2023; AmeriCorps, 2019). Public health framing also emphasizes that connection and community values (e.g., kindness, service, commitment) are protective determinants of health (Office of the Surgeon General, 2023).

L.2 SERVICE, CONTRIBUTION, AND WELL-BEING

Youth-specific evidence supports the idea that service and prosocial engagement are associated with better well-being outcomes:

- In a large U.S. sample of children and adolescents, volunteering was associated with better well-being indicators (including flourishing and, among adolescents, lower odds of anxiety), though the design limits causal conclusions (Lanza et al., 2023).
- A meta-analysis found higher prosocial behavior in adolescence was associated with lower internalizing symptoms and lower externalizing behaviors (Memmott-Elison et al., 2020).

Together, these findings support contribution pathways as part of the protective ecology around youth.

L.3 PURPOSE AS A PROTECTIVE FACTOR AND VALUES ALIGNMENT (SELF-CONCORDANT GOALS)

Beyond service participation, a broader literature links **purpose** (and closely related constructs such as a “sense of mission”) to better psychosocial functioning and lower risk for later distress.

- In a prospective cohort of young adults, having a **sense of mission** (an aspect of purpose in life) was associated with better subsequent psychosocial well-being and mental health outcomes across multiple measures (Kim et al., 2019).

- A recent adolescent-focused synthesis similarly frames **purpose in life** as an asset associated with higher well-being and as a potential protective factor in relation to depressive symptoms, while noting the need for more longitudinal and experimental work (Bronk et al., 2023).

A distinct dimension of purpose is **values alignment**: the extent to which a young person’s goals feel internally endorsed and consistent with developing interests and core values, rather than primarily adopted for approval, status, or fear. In the self-concordance model, pursuing self-concordant goals predicts greater sustained effort and, over time, higher well-being through increased psychological-need satisfaction (Sheldon & Elliot, 1999).

- **Values-aligned goals** tend to be experienced as meaningful and identity-stabilizing (“this matters to me”), even when progress is slow.
- **Externally controlled goals** tend to be experienced as brittle and threat-laden (“I must prove myself”), increasing vulnerability to shame and withdrawal when outcomes shift.
- **Why this belongs in the Stack**: when values alignment is thin, achievement and social metrics can become default substitutes for “why,” tightening links to performance pressure (Cluster D) and digital comparison (Cluster B).

L.4 MECHANISMS (HOW PURPOSE PROTECTS—AND WHY ITS ABSENCE AMPLIFIES RISK)

- Meaning provides a buffer: hardship has context (“this matters,” “I belong,” “I can endure”) (Office of the Surgeon General, 2023).
- Purpose stabilizes identity: it reduces the pull to fuse worth to outcomes, appearance, or group status.
- Purpose reduces reliance on substitutes: it increases “neededness” and lowers demand for quick relief loops.

L.5 REAL-WORLD EXAMPLES (PURPOSE WITHOUT A “GRAND GOAL”)

- **The “What’s my purpose?” question**: a 21-year-old asks, “What’s my purpose?” and feels anxious they don’t have it all figured out. A healthier frame is often: how do you want to be as a person, how do you want to show up, and how do you want people to feel after being with you?
- **Purpose as “who,” not “what”**: purpose can be a way of being—not only a role, title, or achievement—and it remains stable when outcomes change.
- **The “status treadmill”**: when meaning is thin, social metrics (likes, followers, wins) become identity substitutes—constant striving without arrival.
- **The “neededness gap”**: a student has no place where others truly depend on them (mentoring, helping at events, volunteering, caregiving). Life can start to feel optional, even when they’re busy.

L.6 HOW THIS CLUSTER STACKS

- **With Cluster A (Connection collapse):** meaning often grows through connection and contribution; isolation makes purpose harder to build.
- **With Cluster B (Digital life):** purpose drought increases vulnerability to comparison, “should” narratives, and identity substitutes.
- **With Cluster D (Pressure to achieve):** when “why” is thin, outcomes become worth—raising shame after setbacks.
- **With Cluster J (Reward-loops):** emptiness and low meaning increase demand for fast relief behaviors.
- **With Cluster K (Public division & negativity):** meaning anchors buffer hopelessness and future-collapse thinking.
- **With Cluster I (Chronic stress & ACEs):** chronic stress narrows time horizon and agency; low agency makes purpose-building harder.

Bottom line: Purpose drought functions as an amplifier. When meaning, belonging, and contribution are weak, other modern exposures become more potent because there is less internal and communal structure to absorb stress, stabilize identity, and sustain hope.



M: AI AS AMPLIFIER

Cause Cluster M: AI as amplifier (how AI can act as a risk amplifier)

AI as amplifier focuses on how AI-shaped systems (recommenders, generative content, companions, and monitoring tools) can intensify other risks in this paper. It matters because these systems can increase the dose, speed, and intensity of comparison, threat, and misinformation exposures while reducing recovery and relational practice. This cluster is not about blaming AI; it highlights where guardrails and child-centered standards matter most.

M.1 WHAT CHANGED: ALGORITHMIC AMPLIFICATION AT SCALE

What changed is not personalization itself, but the **speed, scale, and capability** of AI-shaped systems: (1) engagement-optimized recommender feeds at massive scale, (2) generative AI that can produce content and conversation on demand, and (3) expanding deployment of AI into youth contexts (companions and monitoring tools). These shifts can increase the **dose** and **intensity** of comparison, threat, and misinformation exposures, while the evidence and transparency ecosystem still lags youth exposure (Office of the Surgeon General, 2023; American Psychological Association, 2023; UNICEF Innocenti, 2025).

Real-world pathways youth recognize:

- **Rabbit holes:** one anxious search leads to more of the same, intensifying rumination rather than relief.
- **Reinforced comparison:** “idealized” bodies, lifestyles, and status are served repeatedly, raising perceived norms (American Psychological Association, 2023).
- **Harm-related content surfacing:** investigations and reports have documented how some systems can deliver self-harm–related or otherwise harmful content patterns to teens, especially when initial signals indicate vulnerability (Amnesty International, 2023; The Molly Rose Foundation, 2025).
- **Conversational mirroring (GenAI):** chat-style systems can echo a user’s language and concerns back to them, which can make rumination feel like “progress” and keep a looping conversation going—especially when the model feels endlessly available and affirming.

M.2 SYNTHETIC PEERS AND RELATIONAL SUBSTITUTION (LOW-FRICTION CONNECTION THAT CAN DISPLACE PRACTICE)

AI companions and “always-available” chat experiences can provide *momentary* relief from loneliness by making users feel heard. Controlled studies and longitudinal evidence show AI companion interactions can reduce loneliness in the short term, sometimes comparable to talking with a person in the moment (De Freitas et al., 2025). At the same time, researchers and clinicians flag a developmental risk: if synthetic connection becomes the default coping tool, youth may get **less practice** in the hard parts of human relationships—repair, patience, perspective-taking, and conflict navigation (De Freitas et al., 2025; Kim et al., 2025).

Real-world pathways:

- After a hard day → AI companion instead of a real person → immediate soothing → fewer bids for real support over time.
- Avoidance learning: “Real people are complicated; the bot is easy,” which can unintentionally reinforce withdrawal.

M.3 GENERATIVE CONTENT AND REALITY DISTORTION (THE “WHAT IS REAL?” PROBLEM)

Generative AI increases the volume of highly polished content—perfect bodies, perfect lives, perfect relationships, perfect “advice.” This can intensify the “highlight reel” effect already present in social media and further erode a stable reference point for normal human struggle. Youth then compare their behind-the-scenes life to an increasingly synthetic, optimized feed (American Psychological Association, 2023). UNICEF also highlights risks to children from AI-generated misinformation and deepfakes, noting evidence gaps in how AI affects children’s social and emotional development (UNICEF Innocenti, 2025).

Mechanisms that matter:

- **Norm inflation:** AI-enhanced appearance and success raise perceived baselines.
- **Trust erosion:** uncertainty about what’s real increases cynicism, vigilance, and social distrust.

M.4 SURVEILLANCE AND OPTIMIZATION PRESSURES (MONITORING THAT CAN INTENSIFY STRESS)

AI-enabled monitoring and analytics are increasingly used in schools and youth contexts (device monitoring, content scanning, “risk” flags, remote proctoring, engagement tracking). Even when introduced for safety, these tools can increase perceived surveillance, reduce trust, and add performance pressure—especially if implemented without transparency, consent, and clear boundaries. Research in higher-education contexts links e-proctoring/monitoring environments with anxiety and stress concerns and highlights privacy and governance gaps (Freccero et al., 2025; Mutimukwe, 2022). Investigative work also documents the broader expansion of school surveillance technology and raises concerns about student rights and potential harms (Electronic Frontier Foundation, 2024).

M.5 CHILD-CENTERED AI SAFEGUARDS (WHAT STANDARDS ARE EMERGING)

While this paper focuses on causes, it’s important to note that **child-centered AI standards are forming**—because they clarify why certain deployments increase risk. UNICEF’s *Guidance on AI for Children* (Version 3.0, updated 2025) outlines practical expectations for AI affecting children, including safety and well-being by design, privacy protections, transparency, non-discrimination, accountability, and meaningful participation of children in shaping systems that affect them (UNICEF Innocenti, 2025). These guardrails matter because they directly address the pathways above: amplification, distortion, relational displacement, and surveillance pressure.

M.6 HOW THIS CLUSTER STACKS

- **With Cluster B (Digital life):** recommender systems can intensify comparison, norm inflation, and compulsive engagement patterns.
- **With Cluster C (Public shaming):** virality and synthetic content can increase reputational threat, dogpiles, and persistence of humiliation.
- **With Cluster K (Public division & negativity):** personalization can concentrate outrage and threat cues, increasing vigilance and hopelessness.
- **With Cluster A (Connection collapse):** synthetic peers and low-friction substitutes can displace real repair practice and help-seeking.
- **With Cluster D (Pressure to achieve):** monitoring and optimization tools can increase surveillance pressure and fear of mistakes.
- **With Cluster H/J (Body inputs + Reward-loops):** amplified arousal and escape loops can displace sleep and reinforce short-cycle coping.

Bottom line: AI amplifies decline when it increases the dose of comparison, threat, and negativity; replaces hard-but-protective human connection with frictionless substitutes; blurs reality; or intensifies performance pressure through monitoring.



FINDINGS IN CONTEXT

Youth and young adult vitality is declining **not because of a single cause**, but because a **modern stack of exposures** is accumulating across the systems that govern regulation (mind, heart, and body). When belonging erodes, meaning and contribution thin, sleep and movement degrade, stress load rises, and digital environments amplify comparison and social threat, young people do not simply feel worse; they lose core capacities: emotional stability, attention, impulse control, hope, and the ability to stay connected under pressure. **In this framework**, many outcomes currently labeled “mental health issues” **can be interpreted** as predictable downstream expressions of overloaded regulation. Because the stack spans daily life, prevention requires **coordinated attention across multiple levels**: families, schools, youth-serving organizations, and broader community and digital environments.

This lens also clarifies why debates often stall. When analysis searches for a **single dominant cause**, it misses how **moderate factors compound over time** into high-risk trajectories. The most concerning patterns emerge when **clusters reinforce one another**: pressure reduces sleep, sleep loss increases reactivity, reactivity increases conflict and withdrawal, withdrawal increases digital immersion, and the spiral tightens.

In practical terms, “**upstream**” means changing the daily conditions that shape regulation and belonging (sleep protection, supportive adults, reduced humiliation exposure, repair pathways, and meaning/contribution), not only expanding downstream treatment capacity after crisis has already emerged. The purpose of this paper is **not to assign blame** to youth, parents, schools, technology companies, or any single institution. It is to **make the stack visible** so communities can respond earlier and more coherently.



RECOMMENDATIONS & UPSTREAM PRIORITIES

These priorities are high-leverage, upstream actions aligned with this framework.

- 1. Rebuild real connection:** expand stable, in-person containers for belonging; protect mentorship and connectedness; reduce co-present distraction that erodes relationship time.
Examples: Families: protect device-free meals/bedtime and one weekly “in-person container” (shared meal, walk, faith/community); **Youth orgs/MSAL:** scale mentoring + weekly groups that build belonging; **Schools:** protect clubs/teams/advisory as non-negotiable connection time.
- 2. Restore foundational regulation inputs:** protect sleep, movement, nutrition quality, and daily rhythms that stabilize mood, attention, and impulse control.
Examples: Families: set a realistic sleep window and reduce late-night phone access; **Youth orgs/MSAL:** build movement + regulation practice into programming (skill drills, outdoor time); **Schools/partners:** align homework/practice norms to be sleep-protective and expand movement.
- 3. Reduce chronic social threat exposure:** lower humiliation dynamics online and offline; strengthen pathways for repair after mistakes; protect youth from persistent reputational pressure.
Examples: Families: coach “repair” after conflict (apology, naming harm, do-over); **Youth orgs/MSAL:** teach conflict navigation and create clear norms against public pile-ons; **Schools/teams:** implement repair pathways (restorative options, adult mediation); **Platforms:** strengthen anti-harassment enforcement and friction for dogpiles.
- 4. Shift from performance-based identity to mastery and meaning:** maintain standards while restoring autonomy, intrinsic motivation, and contribution pathways; widen identity beyond outcomes.
Examples: Families: praise process (practice, persistence, feedback use) over status; **Youth orgs/MSAL:** create contribution roles (peer mentoring, service projects, leadership reps) tied to belonging; **Schools/partners:** reward growth and mastery signals alongside outcomes.
- 5. Strengthen protective adults and role models:** equip caregivers, educators, coaches, mentors, and near-peers to provide consistent co-regulation and recovery pathways after setbacks.
Examples: Families: simple co-regulation scripts (validate, slow down, problem-solve); **Youth orgs/MSAL:** train mentors/coaches and build “who to go to” maps; **Community/schools:** establish near-peer pipelines (older youth/alumni) with supervision and escalation pathways.
- 6. Apply guardrails to algorithmic systems:** treat AI and digital platforms as amplifiers requiring child-centered safety, transparency, and design that does not optimize for dysregulation.
Examples: Families: use high-safety defaults and time/location boundaries for minors; **Youth orgs/MSAL:** provide digital hygiene education and escalation pathways for online harm; **Platforms/Policy:** require default-high safety settings for minors, limit recommender pathways into self-harm/sexual content, and enable independent youth-impact evaluation access.



CONCLUSION

This paper began as an effort to understand what is **driving the decline in youth well-being**—and why, for some, distress is escalating into self-harm and suicide risk.

The central finding is simple: youth and young adult well-being is being shaped by **stacked pressures** that accumulate across daily life, not by a single dominant cause.

What the cause-stacking framework adds is **practical clarity**: it helps communities name the mix of loads and buffers in a given setting, coordinate across sectors, and prioritize upstream changes before crisis becomes the entry point. This is complementary to clinical care, not a substitute for it. And because much of the evidence base is observational, the framework should be used with the limits described in **Methods & limitations** in mind, seeking convergence across domains rather than overclaiming any one driver.

If foundational inputs are restored, relational infrastructure rebuilt, and chronic threat reduced, fewer young people will reach breaking points and more will sustain vitality over time. **Success looks like** more adults who can co-regulate under pressure, model healthy coping, and provide steady, non-shaming guidance, and more youth surrounded by trusted parents, coaches, mentors, faith and community leaders, and near-peers who reduce isolation and create real-world containers where skills, purpose, and hope are built over time.



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MISSION SAVE A LIFE: IMPLEMENTATION CONSIDERATIONS

Implementation note: translating the framework into practice

Mission Save a Life (MSAL) was founded in response to rising youth suicide and the reality that too many families encounter help only after a crisis has already formed. Over time, that work clarified a broader upstream question that this paper explores: **what conditions in daily life are shifting in ways that make it easier for distress to escalate into self-harm and suicidal thinking and what can communities change earlier?**

This section describes how MSAL uses the cause-stacking framework as an organizing model for adult-facing education and community partnership. It is provided for transparency about how the report is intended to be applied.

MSAL's emphasis is upstream before crisis occurs, supporting the adults and institutions most consistently present in youth daily life (parents/caregivers, mentors, coaches, educators, and community leaders) with practical language and tools aligned to the cause clusters.

Organizational purpose (implementation): MSAL develops and delivers prevention-oriented, adult-facing education intended to strengthen role modeling, co-regulation, repair skills, and in-person belonging around youth so that our youth have access to mindful, regulated and safe parents and guardians. These will be released through our **Rethink Vitality Series**.

FROM ANALYSIS TO APPLICATION

If declining youth vitality reflects stacked exposures across mind, heart, and body, then prevention must operate across those same domains. MSAL's role is to translate this analysis into adult-facing implementation: building shared language, strengthening everyday role modeling, and expanding the "containers" and relationships that buffer stress before crisis becomes the entry point.

Near-term implementation focus:

- 1) **Adult learning:** trainings and workshops for parents/caregivers and other protective adults on co-regulation, repair, and sleep/technology norms.
- 2) **Shared language:** simple, non-clinical tools for recognizing stacking early and reducing avoidable load.
- 3) **Community containers:** partnerships that reinforce belonging, standards, and repair pathways in settings where youth already spend time.

Primary audiences: parents/caregivers; coaches and sport leaders; mentors; educators and school-adjacent staff; faith and community leaders; near-peers (older teens/young adults) in structured roles.

Primary delivery channels: adult trainings and workshops; partner toolkits; cohort-based groups (e.g., LIFE Groups) for adult skill practice; community talks; digital resources for reinforcement between sessions.

THEORY OF CHANGE (HIGH LEVEL)

The framework assumes that strengthening protective buffers (connection, sleep and other physiological inputs, skills for repair, and opportunities for contribution) while reducing avoidable load (chronic stressors, humiliation dynamics, and high-friction access to support) can shift trajectories earlier than downstream crisis response alone.

MSAL uses the term **vitality** to describe **sustainable energy for life**—the safety, clarity, and capacity we need to live well and show up for one another. In this report, vitality is framed through a **mind–heart–body** lens: a person’s ability to regulate, recover, and stay meaningfully engaged is shaped by daily conditions (connection, sleep and other physiological inputs, stress load, and meaning) (Office of the Surgeon General, 2023).

OUR MODEL

Our model moves insight into execution through three integrated pillars—**Knowing, Experiencing, and Being**—which correspond to the mind–heart–body framing used throughout this paper.

Knowing (Mind)

The Knowing pillar focuses on synthesis and framework development: translating multi-domain research into a coherent, usable model (the cause clusters and stacking logic) intended to support shared language across stakeholders.

Design principle: prioritize clear definitions and shared terms so partners can coordinate upstream action.

Experiencing (Body)

The Experiencing pillar focuses on structured skill-building through tools, workshops, and cohort-based groups (e.g., LIFE Groups). The emphasis is on repeatable practice relevant to adult role modeling and youth-supportive routines (e.g., co-regulation, repair, and protective norms around sleep and digital use).

For parents and other protective adults, LIFE Groups are the primary place where the skills named in this paper are practiced with support, repetition, and community.

Design principle: emphasize practical repetition and coaching rather than one-time information delivery.

Being (Heart)

The Being pillar focuses on relational infrastructure: strengthening networks of protective adults and supporting community settings where belonging and repair are practiced. The intent is to reinforce protective conditions around youth in day-to-day environments.

Design principle: reinforce protective relationships and routines in the settings where youth already live, learn, and participate.

OPERATIONAL FOCUS

We measure leading indicators within our sphere of influence rather than claiming control over population-level outcomes. These include adult participation and retention in trainings, skill adoption and practice, partner implementation in community settings, volunteer engagement, and qualitative stories collected from adults and youth-serving partners.

The aim is not to replace clinical systems. It is to operate upstream by strengthening protective adult capacity and community conditions before crisis becomes the entry point.

Rethink vitality. Transform tomorrow.

Statement of intent: MSAL's aim is to translate this prevention-first synthesis into practical tools and capacity-building for protective adults and community partners.

Rethink Vitality Today. Transform Tomorrow.

Across families, schools, and workplaces, modern life is quietly draining our **vitality—the safety, clarity, energy, and human capacity we need to live well and show up for one another.**

Let's recapture vitality together.



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