WELLNESS

EDUCATION MAGAZINE



Cover Feature -

The Darkest Skies Are The Brightest

By Sunil Singh and Raya Singh

A Place Of Belonging

By Kathryn Riley

Why Mental Health?

Why Now?

By Gina Cherkowski

What Is Trauma?

By Sophie Bresciani

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Wellness Education Magazine is a monthly education resource for educators, students, parents and professionals in every industry.

Read monthly, globally, Wellness Education Magazine strives to encourage, enlighten and equip readers to better understand the importance of mental and physical wellbeing, its value in every school setting, the need and ease of integration into curriculum and the urgency for students to embrace their pursuit of happiness with knowledge, tools and resources from experts in their files.

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"These are our children, they are our future. It's time to advocate for preventative mental health programs in every school."

GOLDIE HAWN
CEO and Founder of MindUP

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The Darkest Skies Are The Brightest:

Our Lessons About Struggle And How Mathematics Became Our Life Coach

By Sunil Singh and Raya Singh



Spoiler alert: Happiness has always gotten the better of me…

The inspiration for the title of this article comes from the third solo album (2021) by Anneke Van Giersbergen, one our favorite singers of all time. Not only is she one of the greatest singers of all time–just ask Raya–she always smiles when she sings. She has been singing for over 25 years. She lost both her parents within weeks this year. She mourned openly and publicly. She still smiles.

Just like scientists have discovered a genetic predisposition to depression, there have also been some investigations into having that same DNA hard-wiring for happiness. Whenever they finally isolate the gene, I am pretty sure Anneke will have it. And, so will I.

The reason I am so confident that I do, is the story that I am going to tell you of my life the last ten years was filled with various kinds of adversity.

It got so ridiculous that I felt like the universe was just seeing how many different setbacks it could throw at me–perhaps testing to see how resilient this hypothetical idea of "Sunil being born happy" really was. Like I was some lab rat in some cosmological stress test of the existence of such a gene.

While I am not discounting the fact that I might have gotten lucky in the genetic lottery for happiness, I also made purposeful and meaningful decisions early on as to what I was going to center in my life, warding off much of the unhappiness that I should have inherited. Me.

Happiness has always gotten the better of me. Also, and this could be related, I might be the least ambitious person I know. Sure, I have written many books and now travel the world speaking, but I only mustered up the initiative to build a website just this year. I think this word probably best sums up my personality.

Most people are the drivers of their journey through life. Not me. I have been sitting in the passenger seat, playing with the music selections, and looking out at the window–living wholeheartedly in the present–for as long as I can remember.

"Happiness has always gotten the better of me."

Because I took extraordinary measures to always look out for my wellness, anything that fell within that radius of my happiness–my children, my family, my friends, and my obsession with mathematics and music–reaped the benefits of my own self-care. Job, career, societal norms, and material wealth never interested me. In fact, up until last October, I had spent the previous 6 years sleeping on a basement couch in a rental home, co-parenting our kids. You don't need to read tea leaves to understand that this was a confluence of marital and financial failures. You also need to go back to the first sentence.

Sure, sometimes the car skidded off the road, and I ended up in one of many of life's ditches. I just dusted myself off, got back in the car, and was completely open to new destinations–positive or negative. The best life lessons are found stuck in the ditch, not driving on a smooth road.

In my 50's, the negative destinations piled up early. Divorce, quitting teaching, and losing a math business to a fire two weeks before grand opening. All this happened in a span of five years. Quitting teaching was easy. That was a self-care move. I got criticized by almost everyone about that choice–

especially since it was made after my divorce. Shouldn't you stay to support your kids with your good, stable salary? That was the question posed to me more than once.

The question I asked myself, however, was "Shouldn't you leave to preserve your mental health, and before serious health issues arise"? With a resounding "yes", I quit. Even though a vice-principal at the school implored me to take a year off, thereby giving me a safety net, I still chose to quit.

That's because I knew I wouldn't be coming back.

ucation. As such, I could not continue to be a classroom teacher that had to teach the most anemic and boring ideas of mathematics to kids who already had a long history of being turned off by the subject. I got paid handsomely to teach math, and I was quitting.

Imagine the stresses of students who have to endure the drudgery of school mathematics, taking on anxiety and trauma, believing it's all their fault. I think that subconsciously factored into me quitting. As caring and compassionate as a teacher I was, I was still

"Take pride in knowing that your struggle will play the greatest role in your purpose."

Marcus Rashford, Manchester United Football Club

Everyone got it wrong. I also quit for my kids. Not to be overly dramatic, but when you are unhappy in your job, there is a greater probability of getting ill. I didn't want to get ill with young children. Financial challenges are always dwarfed by health ones. My brain wasn't completely clear as to the logic, but my gut screamed in no uncertain volume–"get the hell out, Sunil!"

I didn't know what I was going to do, but I knew exactly what I didn't want to do anymore. I also had this quiet voice that believed in me tell me that I could change the world of math education. As such, I could not continue to be a classroom teacher that had to teach the most anemic and boring ideas of mathematics to kids who already had a long history of being turned off by the subject. I got paid handsomely to teach math, and I was quitting.

Imagine the stresses of students who have to endure the drudgery of school mathematics, taking on anxiety and trauma, believing it's all their fault. I think that subconsciously factored into me quitting. As caring and compassionate as a teacher I was, I was still inflicting harm on them with a math curriculum which was designed, willfully or not, to do just that.

Current math education is naive and oblivious to its own toxicity. It even factors in math anxiety as an inevitability by often using the phrase "overcoming math anxiety"--as thought it's common and expected. There's the red flag that should alerts parents that math education has never been about attending to mental health, so without fully realizing it, quitting teaching–even with the years of financial hardship that followed–was and will continue to



be the best decision I made in my life.

I didn't know what I wanted or needed to do, I just had clarity on not continuing to be a teacher. Over the next 18 months, I poured everything into starting a business called The Right Angle. It was going to be, most likely, the first math store/school in Canada! It was located in the historic village of Unionville, about 30 minutes north of Toronto. It was right beside a very popular candy and ice cream store. It was perfect. Two weeks before the grand opening, there was a fire–the first time in the history of this building, built in 1871.

I had lost pretty much everything, and nothing was recovered by insurance because it was, in legal terms, a "frustrated lease". The streak of personal setbacks forced me to move back in with my parents, who helped out financially in ways I could never thank them enough.

For the next 5 years, my kids would come over every other weekend. It was challenging, but looking back now, both them and myself got to have this extra time with my parents. Their fondness of my mother's cooking was born during this time, having pointed memories of her chicken and fish curries.

Life had given me a warehouse of lemons, and a lens on life that should have soured me on finding any hope in what I was doing. I guess I just laughed at

the universe's sense of humor, and was determined to squeeze every one of those lemons into lemonade.....and I did.

I ended up writing three math books, all deliriously about how much happier I was because of mathematics in my life. The last one, Chasing Rabbits: A Curious Guide to a Lifetime of Mathematical Wellness, I began writing in November, 2019. The only reason this book will be referenced in this article is because of the last two words in the subtitle.

Mathematical wellness. I think the universe must have tipped me off that a global pandemic was coming. Mentally, I was more than ready than most of my friends to deal with the social isolation that would define our lives for the next few years. I had already spent the last five years in my head and getting deeply connected to my inner self through a deep dive of the highest purpose of mathematics. Bookmark those last four words–highest purpose of mathematics.

I also am an obsessed audiophile. My fourth book, written through the pandemic, is called Sonic Seducer:

"Lust for Life With Our Heaviest Moments, Memories, and Magic of Rock and Roll."



My heaviest moment in life would begin in the Fall of 2021, just over a year removed by this scrapbook Raya had started with the mathematics I was teaching her. I foolishly thought that staying at home would be this wonderful opportunity to homeschool Raya, to lift up her spirits through the magical world of numbers.

Ironically, my book about how mathematics could provide a lifetime of wellness was released. It also began Raya's downward spiral, hidden from her parents.

"I truly do not have many memories of this time of my life, it is extremely vague. But I think that is most common when people are depressed, everything just kind just kind of goes blank when you're depressed. You know you are conscious, living and breathing, but your brain is

just turned off for what the rest of it is, what the rest of your life is supposed to be. I was in this state of 'nothingness', essentially, for about a year almost. It was confirmed I was depressed around the beginning of grade 8."

Like many parents and educators, we chalked up this decline in mental health as a product of the pandemic and online learning. Initially, I was too caught up in trying to find the reason, as if I was somehow capable of locating the source of Raya's depression and eradicating it.

"I wish I could answer why and how my depression came to be, but I honestly do not know. I was fed the idea from adults that it was because I was isolated from Covid, and it was just from Covid, blah blah. Sure, that is definitely a part of it, but I do not think that is the full story. The full story is actually filled with lots of blank pages. That's depression."

- Raya

As 2021 ended, Raya's depression got worse. She began cutting herself. Initially just on her arms, but eventually her legs. A psychologist's examination was filled with check marks of signs for the seriousness of this depression. There were two words that stood out.

Suicidal ideation.

While Raya could not explain all the reasons why a deep fog of sadness was surrounding her, slowly removing much of her life, I would be able to–in time–explain how my response to Raya's deteriorating mental health unfolded. It was mathematics.

It was contributing to Raya's pain. For me, it was contributing to accepting it. A soothing balm that I wrote about in my book, but never imagined I would ever need to apply–especially concerning my always smiling and laughing daughter.

But, mathematics has given me not only a life of wellness, but a spherical view of life filled with details–from the light and buoyant to the dark and distressing. Mathematics allowed me to lean into her depression at the right "radius". I wasn't smothering her with concern and I also wasn't detaching myself from her agonizing plight.

I absorbed it all. Her present, her past, and this feels horrible to say and write–but a future where she remained forever with her darkness. I looked back at dozens of old photos of her, reminding me of someone she was, but wasn't now. To be self-immersed in that delta of her past and present personality, was part of my own therapy.

Continued at end of magazine...

The Art of Possibilities

When School Becomes a Place of Belonging

By **Kathryn Riley**
UCL Emeritus Professor of Urban Education



"Belonging is that sense of feeling confident that you will fit in.

It's a way of being with - and relating to – ourselves and the world around us.

A sense of belonging encourages us to grow into our identity and become part of the 'place' in which we find ourselves."

Schools stand centre stage in the lives of young people, yet they are not always places of belonging. However, in these challenging and uncertain times, schools need to be places of welcome, connectivity and belonging.
I'd like to give you a flavour of two very different experiences of school life:

- I belong here: what it feels like to belong in school, and,

- I don't belong here: what it means to be excluded and to find yourself as the outsider looking in.

Three major factors shape the kind of experience a young person is likely to encounter: the aspirations of policymakers; how schools are led; and the actions of those who make up the school community. We know that schools can change. It's all about intentions, purposeful actions and compassionate leadership. In the article you will find tools designed to enable you to look with fresh eyes at what it means to belong in school - and to see the possibilities.

The Two Realities

A sense of school belonging is a social construct. It is formed by what each child and adult brings with them as they enter the school gates (their histories, their day-to-day lived realities, their sense of identity), as well as the culture of the school. The school's beliefs, practices and expectations matter.

Here are two widely differing accounts about the belonging/ not belonging experience, both are drawn from my research. The first account (Reality I: I belong here) gives a flavour of what it feels like to belong in a school which, in the past, had been disconnected from its local community but is now firmly rooted. The second account (Reality 2: I don't belong here) offers a very different picture of school life.

Reality 1: "*I belong here*"

I visit Redvil primary school in the North-East of England on a winter's day. It is pouring with rain. The school lies in the middle of a large 1950s post-war Council Estate of social housing, today an area of high unemployment and deprivation.

Headteacher Dave Phillips tells me that when he held his first parents' meeting - no one came. The empty Hall reflected the gap between the school and the community and the sense that school life was an alien and joyless experience, for parents and children alike.

Today, Redvil is about to host its weekly '*bestseatsinthehouse*' assembly. Standing at the entrance to the school I watch as parents and grandparents struggle up the hill, pushing buggies, the toddlers in their wake jumping the puddles. The growing crowd flock into the school, packing themselves noisily into the same Hall in which Dave had held his first disastrous parents' evening.

Achievement takes many forms at Redvil and the children compete to show how great they are - at spelling and tables, geography and science. Their achievements are met with cheers and rounds of applause.

One of the 'Stars' of the week is 'Maya'. Her teacher is sitting near me and with great pride she stands up and introduces Maya. Smiling at her she says….. 'Maya' where do I start? She's a lovely girl, caring and hard-working.

She has a positive attitude to everything that she does. She is hungry to learn. She's a credit to her parents and herself. Maya's proud relatives cannot stop beaming and clapping.

Winners from the 'bestseatsinthehouse' assembly spill out into the hallway, eager to spend their awards on the new vending machine. It is a vending machine with a difference, not fizzy drinks or crisps but books: the classics, 'The Three Musketeers'; mysteries of the past, 'The Totally Dead Dinosaurs'; and the chocolate fix, 'Charlie and the Chocolate Factory'.

The sound is deafening. If you could bottle the energy, you could light up the whole estate. (Adapted from Riley 2022)

Evidence tells us that in schools where belonging works, such as Redvil, more young people experience a sense of connectedness and friendship, perform better academically and come to believe in themselves. Their teachers feel more professionally fulfilled and their families more accepted.[1]

We also know that addressing a sense of school belonging has been found to close the achievement gap by between 50- 60% and has benefits that stretch into adulthood. The presence of school belonging in adolescence is also linked to positive long-term outcomes for adult mental health and the likelihood of future education and employment opportunities.[2]

Reality 2: *"I don't belong here."*

The concepts of 'belonging' and 'compassionate leadership' - as a form of leadership which helps create the conditions for school belonging - have been central to my research for some time. [3] When I look back at what I have learned, the image on the previous page, 'I don't belong here' stands out. It is taken from research carried out two decades ago with young people who had been excluded from school. The small child in the drawing is distraught and the caption reads: You're thick.. You're stupid.. You don't belong here. Get out of my school. [4]

For that research we interviewed young people, their teachers and their families for that research and they all wanted the same thing - for things to be different. But somehow, they couldn't find their way through the maze of conflicting expectations to have the conversations that matter.



The drawing is an abject depiction of the experience of being excluded, and it has both haunted and galvanized me into action for many years.

The problems of exclusion and alienation are far from being over and in many ways, are growing. The impact of Covid-19 has shifted the ground, and many young people feel dislocated, often acting out their frustrations through challenging behaviour, recreating a cycle of frustration.

Young people's sense of school belonging is declining, with nearly 1 in 3 now feeling they don't belong in school. [5] Exclusions and suspensions are growing, in many jurisdictions, and some young people - arguably those with the greatest needs – find themselves handed the ultimate 'red card' of exclusion from school. [6]

The impact of exclusion, ostracisation and a sense of 'not' belonging is far reaching. It affects not only the individuals involved but also their families and society as a whole. The disaffected search for 'belongingness' elsewhere, finding it in many ways, including extremism, self-harming and gang membership. The excluded become the exploited.

Today, some children and young people find themselves in schools which set out to build connections and a sense of belonging, and others don't. Whether they get to experience a sense of belonging in school has become something of a post code lottery. It's happenstance. If it's all a bit of a lottery – isn't it time we changed the odds?

The following includes three tools and ways of thinking designed to enable you to look with fresh eyes at what it means to belong in school, and to see the possibilities: Belonging and ME; First Principles; and The Prism of Place and Belonging.

Tool I: Belonging and ME

We all bring what we have experienced as children into our lives as adults. Let me invite you to go back in time to your own school days – your first school, secondary school, high school - whichever comes to mind. Think about your school experience as a set of traffic lights. *What did it feel like? *Was it a good feeling? *Did you experience a sense of welcome? *Were you an insider or an outsider?

'Press' the green light if you had a sense that you belonged and were a part of the school community.



'Press' amber light if you were an 'in between' – felt you fitted in some times but were on the periphery the rest of the time.



'Press' red if you didn't experience a sense of welcome and felt you didn't belong.



I have asked many participants of workshops and conferences to take part in this 'traffic lights' exercise. If they 'press' green, then the positive memories came flooding back, creating a warm glow: friends remembered; staff who encouraged them along the way; an abundance of opportunities to help them explore their identity and develop their skills. - It's how it should be.

If the participant 'presses' red, then they are likely to have been bullied or excluded by their peers or ignored or denigrated by their teachers. In one workshop, a participant told the rest of her group:

"We were from the other side of the tracks, everybody looked down on us. It was awful. I could make myself sick at 8 o'clock every day so that I didn't have to go to school. That's why I became a teacher. I didn't want anyone else to feel like that."

If participants 'press' amber, they probably saw themselves as different, standing out. Perhaps they were the newcomer, or the person who did not conform to the conventions of the day: a sporty culture, a girly culture, part of the lads' culture. There is a strong possibility that they were from a family on the move, as was the experience of the workshop participants below:

- *My dad was in the military, we moved school every year or two.*

- *We came from Bangladesh, and we didn't know the rules of the game.*

- *We were the city kids who found ourselves slap bang in the middle of the countryside.*

Our 'traffic lights' experiences stay with us, deeply embedded in our psyche and our memories. We remember how we felt in school. All go with the Green. A definite stop with the Red. Waiting around for the Amber light to change.

Tool 2: First Principles

The principles - the fundamental underpinning truths which guide school life – are critical. Principles shape intentions, guide behaviour and influence actions. How young people experience school-life (the degree to which they feel they belong in that place called school) will shape their belief in themselves and their readiness to encounter the world they live in.

Let me introduce you to what I have come to view as the five principles of school belonging. They are based on research and practice and encapsulate the sets of beliefs, aspirations and assumptions which form the foundations of understanding, policy and practice.

The Five Principles of School Belonging

1. **Safety:** The school is a safe space - physically and emotionally – for all concerned.

2. **Presence:** Adults are attentive to the experiences that each child brings with them. Everyone is known and seen for who they are.

3. **Voice:** Staff and young people know what is expected of them and have a voice. Families experience a sense of being heard.

4. **Connectivity**: Young people and staff feel connected to the school. Social and professional relationships are respectful and enabling.

5. **Agency**: Staff and young people have a sense of agency, believing that what they do and say makes a difference. The school helps develop their skills and provides them with the opportunities to enact their agency.

Ask yourself...

o Which of these principles underpin the work of the school I know?

o Are there any that might need strengthening?

o Are there any principles missing?

Tool 3: The Prism of Place and Belonging

A prism refracts the light or breaks it into different parts. As the beam is dispersed, the 'big picture' becomes separated and the different elements within it can be seen.



This is akin to taking all those aspects of school-life which are connected to relationships and emotional encounters - inclusion, exclusion, well-being and physical and mental health, cyber bullying - and bringing those experiences together them in one shared narrative: that of belonging.

'The Prism of Place and Belonging' offers its own a distinctive window into school life, as both a conceptual instrument to frame research and as a development tool. As a developmental tool, looking through the Prism is a way to distinguish between what you think is happening in school and what you know is happening.

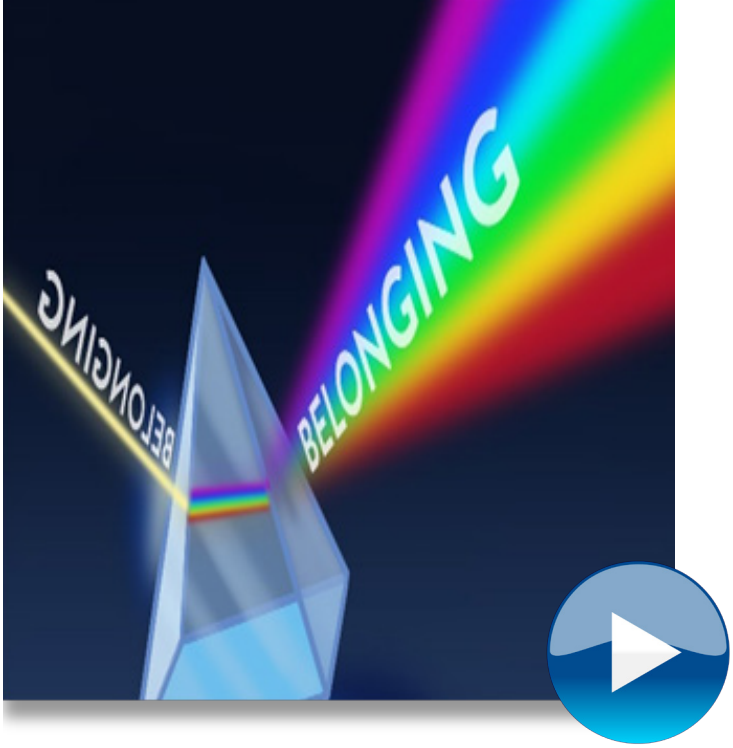
Taking account of where the light falls, enables you to make fresh links and connections, and to ask: Who are the insiders and who the outsiders in this school? Who feels that they belong and who doesn't? It also encourages everyone concerned to look at the school from two very different perspectives: from the 'Inside-out' and the 'outside-in' and to ask some important questions.

Looking at the school from the 'Inside-out'

Do young people understand what is expected of them, believe that what they say matters, think their teachers listen to them?

Do they feel connected and safe (physically and emotionally): a key aspect of belonging?

Do staff feel respected and have a voice?



Looking at the school from the 'Outside-in'

Do families feel accepted and heard?

Whose Voices are heard?

How does the school respond to what's going on? (locally, nationally internationally)

What Next for You?

This article is an introduction to some of the core issues around belonging and exclusion. I hope the examples provided will inspire you to embark on your own shared school belonging journey. Of course, like any journey, yours will start from where you are … and you have many options:

- You could decide, for example, to embark on a 'road trip' with fixed objectives: How can we bring our local communities on board and strengthen connections?

- Your chosen journey might be a 'walk-about' intended to help you deepen your understanding of what motivates and inspires young people: In the wake of Covid-19, how can we engage young people on the margins of school life and develop their sense of agency?

- It might even become an 'Odyssey', an extended knowledge quest, aimed at recalibrating a school or a school system: How can we create the conditions for belonging and re-engineer our schools to meet the challenges of the future?

Whatever your belonging journey, do get others to join you. I hope you will find it enjoyable and worthwhile!

"VULNERABILITY SOUNDS LIKE TRUTH AND FEELS LIKE COURAGE. TRUTH AND COURAGE AREN'T ALWAYS COMFORTABLE, BUT THEY'RE NEVER WEAKNESS."

– BRENÉ BROWN



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About the author:



Professor Kathryn Riley is an UCL Emeritus Professor of Urban Education and started work in education as a volunteer teacher in Asmara, Eritrea.

Her past experience includes being a teacher in inner-city London schools for over a decade, an elected politician for the Inner London Education Authority (ILEA), and a local authority chief officer.

Her international work has included two years with the World Bank, heading its Effective Schools and Teachers Group.

She had the good fortune to carry out work on teacher quality, teacher education and accreditation, educational reform and school leadership, partnering colleagues in many countries in research, policy and development work, and to be involved in projects with the OECD and UNICEF.

She is currently an Associate of the Staff College UK (which works with Education and Children's Services).

With the late Dance-Poet Tio Molina, she co-founded The Art of Possibilities: a vision of schools as places of belonging (https://www.theartofpossibilities.org.uk). She has long relished being part of the ICSEI Global network of educators (The international Congress for School Effectiveness and Improvement) and in 2020, along with Tio Molina, were keynote speakers at the ICSEI 2020 Congress in Morocco.

Kathryn is also a writer. Access her most recent book Compassionate Leadership for School Belonging free online at UCL Press: https://www.ucl-press.co.uk/products/171324.

Upcoming book, 'I Belong HERE' focuses on the 'How' of belonging: the kinds of connected approaches which can bring schools, communities and local systems together, to create that sense of place and belonging for young people.

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Dr. Gina Cherkowski
Senior Editor

Welcome to the inaugural issue of Wellness Education Magazine.

Mental health is something we're all becoming more aware of, especially when it comes to our young ones. Parents, teachers, and experts are noticing that kids are feeling more stressed and anxious than ever before. It's worrying because many young people are struggling with things like anxiety, feeling dysregulation, and even depression. Sadly, some children and youth are turning to harmful behaviors like addiction, self-harm, social withdrawal, and many are even withdrawing from or avoiding school.

There are a few reasons why this might be happening. The pandemic, for one, has caused a lot of social isolation. During the pandemic, many kids missed out on their usual school routines, extracurricular activities and from fun activities with friends. Fast forward to today; many youths are still not quite back to their normal routines as they are not engaging in social, recreational and school activities to the same degree as they used to. Plus, the rapid increase of youth screentime—through phones, social media, and video games—as technology has become a big part of their lives, affect their moods, their social patterns and behaviours, their sleep, and even how their brains work.

Studies show that mental health issues often start early. In fact, half begin by the age of 14 years, and 75% occur by the time someone is in their mid-twenties. Furthermore, young adults between 15 and 24 seem to struggle the most with things like depression and substance abuse.

Even in classrooms, teachers and students can feel the stress and it is significantly impacting learning and classroom culture. One seminal study found that measured cortisol levels in students and teachers conformed that when students are stressed, the stress can rub off on the teachers, and vice versa. In other words, stress is a contagion. That means everyone—teachers, students, and families—are all impacted by stress when we share the same places and spaces.

But there's hope. We're working on solutions that involve everyone—parents, teachers, and students alike. At the Headwater Learning Foundation, we have launched a research project to help students, teachers and families using a system approach that involves all stakeholders. And we're already seeing some early positive results.

In the meantime, what's most important is that we all recognize how crucial mental health is for learning and living a happy life. We need to support each other, students, teachers, schools, and parents, because we're all in this together.

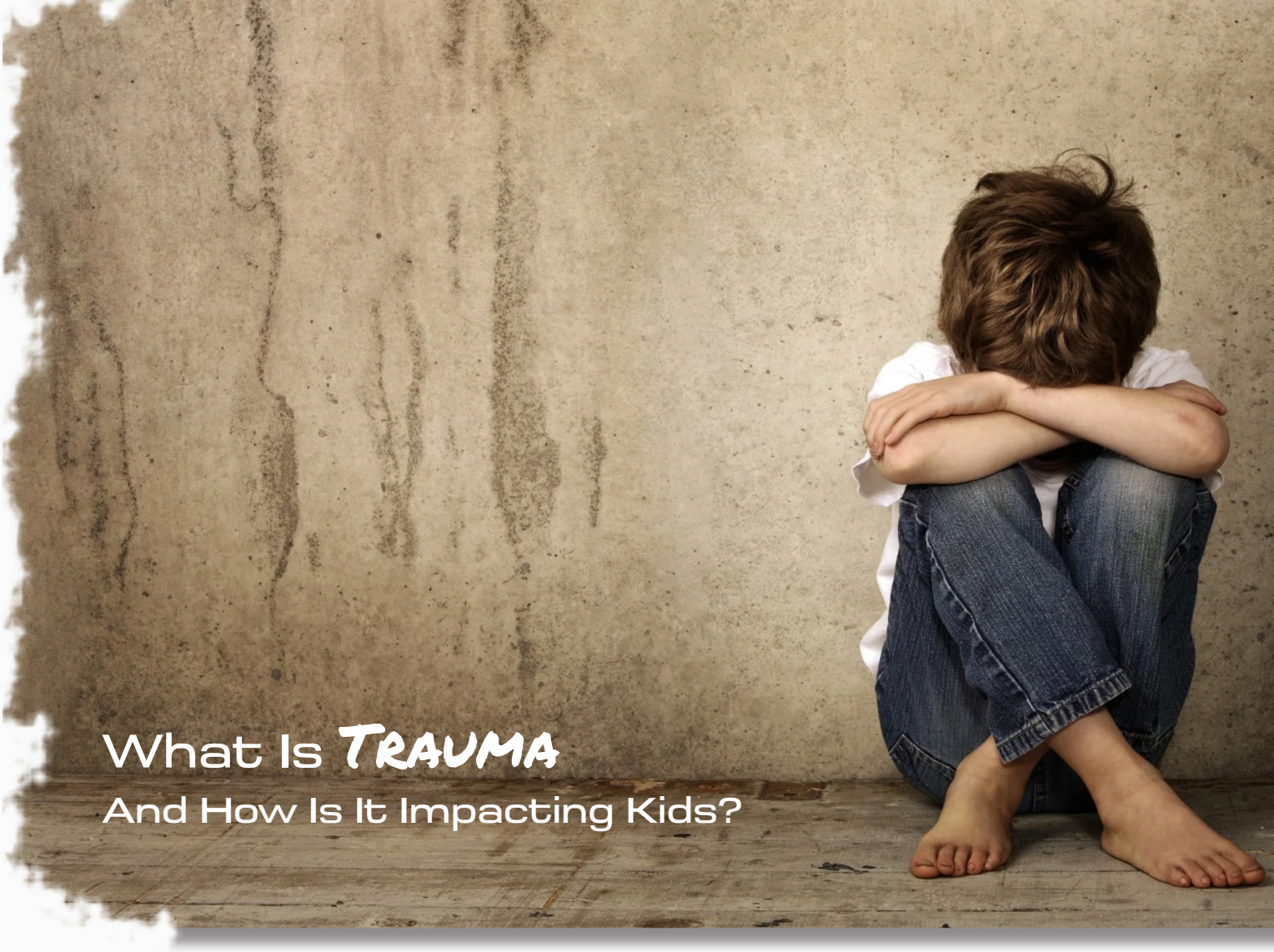
"MENTAL HEALTH PROBLEMS DON'T DEFINE WHO YOU ARE. THEY ARE SOMETHING YOU EXPERIENCE. YOU WALK IN THE RAIN AND YOU FEEL THE RAIN, BUT, IMPORTANTLY, YOU ARE NOT THE RAIN."

– MATT HAIG



"Wellness encompasses a healthy body, a sound mind, and a tranquil spirit. Enjoy the journey as you strive for wellness."

– Laurette Gagnon Beaulieu



What Is TRAUMA
And How Is It Impacting Kids?

By *Sophie* Bresciani

Trauma, and the related diagnosis of Post-Traumatic Stress Disorder (PTSD), is often associated with veterans or victims of assault, so why is the term being used so frequently in childhood and school settings?

What is Trauma?

Trauma is a much broader concept than many people think, and refers to the emotional response that occurs in the brain when an individual's physical or emotional safety needs are not met. Trauma is known to be caused by many different experiences, and as such, is



highly personal. What may cause a trauma response in one brain may be perceived as typical or less stressful to another brain. In some cases, periods of neglect, food insecurity, or emotional abuse can cause a trauma response in individuals.

PTSD, however, is a specific trauma diagnosis, and can develop when trauma is not properly processed. According to the DSM-5, the specific disorder of PTSD may be diagnosed when an individual experiences, witnesses, or learns of a loved one's death, threatened death, threatened or actual serious injury, or threatened or actual experience of sexual violence, with prolonged symptoms associated with re-experiencing the specific trauma.

Research conducted by organizations like the National Institute of Mental Health and the Canadian Psychological Association report the number of individuals diagnosed with PTSD between 5 and 8% of the population. However, a 2016 study from the World Mental Health Survey Consortium found that 70% of the survey respondents had experienced a traumatic event, with more than 30% of respondents experiencing four or more traumatic events. The statistics show that trauma is common among populations, and although individuals may not be diagnosed with PTSD, many adults and children still deal with trauma.

Trauma and the Brain



Trauma responses are triggered in our brains to help us survive when there is a perceived threat, and these responses can be traced back to our ancestors. Imagine you are an early human hunter-gatherer, and you are walking through a forest. You come across a hungry wild animal. What do you do? Trauma responses, commonly simplified as "fight or flight", are what kick in here and enable the hunter-gatherer to survive.

Because of this, trauma is linked to a few key areas of the brain. It is not a surprise that some of these areas of the brain are some of the oldest: the amygdala and the hippocampus. The amygdala is the part of the brain that governs emotions and instincts, and in patients with trauma, especially PTSD, this area is overactive. It is often referred to as the "animal" part of the brain.

When a trauma response is triggered, the amygdala can override the prefrontal cortex, which is what helps us reason through situations. The hippocampus is the part of the brain that stores and files memories, and during a trauma response, a brain may struggle to differentiate between what occurred in the past and what is occurring presently.

This is one of the more challenging parts of PTSD: a patient experiencing trauma is essentially reliving the traumatic event in their brain over and over again. With help, individuals with trauma can "rewire" their brains, reinforcing the prefrontal cortex and reducing their traumatic responses to potential triggers.

Trauma Responses

Trauma responses are linked to the brain's perception of safety. In the hunter-gatherer example, the brain perceives a threat to the person's physical safety and all mental and physical capacities are directed to ensure survival. However, trauma responses can go beyond just physical safety concerns. Emotional safety, and perception of emotional danger, can cause a traumatic response in the brain too.

The "fight or flight" adage comes from research on trauma. A hunter-gatherer that came across a wild animal might choose between fighting the animal, or freezing to avoid detection. However, trauma responses include more than just these two:

Fight: This response can include a physiological preparation for a fight, where the body becomes tense and feelings of aggression increase, but can also refer to an emotional need for power and control.

Flight: This response can also be physiological, feeling fidgety or restless, but can also look like avoiding conflict, busying oneself with work to avoid the stressor, or in some cases, using drugs or alcohol to avoid dealing with memories or emotions.

Freeze: The physiological freeze response includes feeling stiff or numb, and can manifest as a mental "check out" or disassociation when faced with a triggering situation.

Fawn: This response is emotional, and is typically developed when an individual is exposed to an emotional trauma repeatedly. The individual develops a response that appeases the perceived threat through agreement, special attention - doing everything to keep the threatening presence appeased.

What now?

Trauma exists in all communities, workplaces, and schools. During the COVID-19 pandemic, many people struggled with physical and emotional safety, and this prolonged exposure to an unsafe situation may have developed into trauma responses for some individuals. Others score highly on a screening assessment known as the Adverse Childhood Experiences (ACE) questionnaire, which means they have experienced repeated instances of physical or emotional danger in childhood. This may still be causing a trauma response in adolescence or adulthood, as the brain has learned to protect itself through the responses listed above.

While resolving trauma requires the support of mental health professionals, individuals working with youth experiencing trauma can do a number of things to support their needs. The primary goal for a trauma-informed practice would include maintaining an environment that enables kids to feel safe. Some recommendations for classrooms or other common spaces for kids include:

1. Develop predictable routines with clear expectations.

Individuals experiencing trauma may

feel safer in a predictable routine. Reducing unpredictable situations helps individuals feel in control and secure. Visible routines, timers, and reinforced expectations are key here.

2. Reduce environmental stimuli.

While fluorescent lighting, bright colours, walls covered with projects and messy bookshelves may be commonplace in playrooms and classrooms, this can be overstimulating for individuals with trauma. Keeping spaces organized, rooted in nature with natural light and more muted colours, provides a soothing space where kids can feel safe to exist and explore.



3. Focus on emotional learning.

Recognizing and naming emotions invites the prefrontal cortex to the emotional response in the brain. It may be beneficial to practice naming emotions – and how an individual experiences those emotions – during times of calm and predictability.

Caregivers and teachers can model this, too: I was so frustrated before because I couldn't find my keys, but I took a few deep breaths and once I was calm I found my keys quickly. Phew!

4. Consistency is key, especially with behaviour.

Many young people experiencing trauma do not understand why they react so strongly when their trauma response is triggered. While it may be tempting to respond by raising your voice, maintaining a predictable and soothing presence will enable a child or teen to regulate their response more quickly. Once the individual has calmed down, review the expectations for behaviour.

Of course, if an individual's trauma response is violent or aggressive, it is important to consider the safety needs of all people in the space.

The stronger your relationship with the child or teen is, the more easily you may be able to identify the beginnings of a trauma response, which may often be a self-soothing behaviour, like humming to oneself, rubbing hands or feet together, or otherwise fidgeting.

At this time, use your established connection with the individual to redirect their attention or behaviour. Consider having an alternative space or activity available if necessary. Once the child is back to an emotionally regulated state, you may want to ask questions, such as "I saw when we started activity you seemed a little worried (or frustrated, agitated, stressed, etc.), was there something about it that you don't like? If you can tell me about that, then maybe I can help you feel better next time we do something like this". This provides an indication that the activity and trigger may occur again, and helps the individual give a name their emotional response. It also shows that you, as a caregiver or teacher, want to support the individual and ensure they are able to participate in the activity fully.

Caring for individuals with trauma carries a high emotional toll. It is important to practice self-care to ensure your emotional needs are being met, too. Modelling self-care is an important part of your own wellness, but also demonstrates to children with trauma that it is normal and healthy to take breaks and care for yourself. Healing from trauma is a long process, and implementing trauma informed practices isn't a cure or fix.

While trauma-informed practice aims to reduce the triggers and stimuli that might cause a trauma response, individuals experiencing trauma will need the support of mental health professionals to resolve or process the trauma effectively. Prioritizing safety and understanding in homes and classrooms is a collective first step that can enable individuals with trauma to feel safe, heard and respected.

Learn More: Books and Podcasts On Trauma

- The Body Keeps The Score by Bessel van der Kolk
- The Myth of Normal by Gabor Maté
- Trauma: The Invisible Epidemic by Paul Conti, MD
- "How To Treat Emotional Trauma", The Psychiatry and Psychotherapy Podcast
- "A Crash Course for Trauma-Informed Teaching", Truth for Teachers Podcast





Share this issue with your students, peers, parents and professionals you know. Make this a new monthly connection for curiosity, interaction, wellness and improved quality of life.

All ages will enjoy this content as they too pursue their happiness, wellbeing, piece of mind and body.

> "REST AND SELF-CARE ARE SO IMPORTANT. WHEN YOU TAKE TIME TO REPLENISH YOUR SPIRIT, IT ALLOWS YOU TO SERVE OTHERS FROM THE OVERFLOW. YOU CANNOT SERVE FROM AN EMPTY VESSEL."
>
> – ELEANOR BROWNN



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ENHANCING WORKPLACE WELLNESS

Feeling Your Best at Home and Work:

How to Get Your Body Working For You

By Steven Langer



Welcome to our busy lives where things always feel chaotic. Life throws so much at us; it can feel like we're always juggling tasks. We have so many roles, from parent to employee, friend to caregiver, and sometimes it feels like we are always shifting from one role to the next. But it's important to remember that taking care of our well-being isn't just a luxury; we need it every day. Being well is key, both at work and at home. There's a saying, "When you have your health, you have a thousand wishes. When you don't, you have just one."

We have all heard that all we need to do is focus on wellness and take better care of ourselves, but with all the different advice out there, it starts to feel like another list of tasks. It might be starting a new workout, spending time outdoors, enjoying some alone time or time with friends, eating right, getting enough sleep, cutting down on screen

time, and finding better ways to work to stay well.

It's easy to get overwhelmed by all the talk about wellness, but the truth is, we're all different and we recharge in our own ways. We need to make time for the things that help us feel connected to ourselves and bring us back to feeling normal. Also, studies have shown that different activities trigger different reactions in our bodies, releasing the chemicals that make us feel good.

Today, let's explore the world of neurotransmitters—those tiny messengers in our brains that affect how we feel. We'll look at serotonin, dopamine, endorphins, oxytocin, and cortisol. These five are key players in our well-being.

Serotonin: The Mood Master

Think of serotonin like the conductor of your brain's orchestra, controlling your mood, sleep, and appetite. This neurotransmitter quietly shapes how we feel. When serotonin levels are low, it's like our inner music is turned down, and this can lead to mood problems like depression. So, how can we keep our serotonin levels in tune?

Try these activities to boost your serotonin levels:

- Morning Sun Exposure: Start your day with some sunlight. Go for a quick walk or enjoy your morning coffee outside. Sunlight helps your body produce serotonin.

- Exercise Routine: Make sure to get regular exercise like jogging, swimming, or playing your favorite sport. Physical activity raises your serotonin levels and helps you feel better.

- Mindfulness Meditation: Try mindfulness or meditation to relax. These practices help manage stress and can increase your serotonin levels.

- Expressing Gratitude: Keep a gratitude journal and write down things you are thankful for regularly. Also, make it a habit to talk about gratitude with others every day.



Dopamine: The Reward Chemical

Dopamine affects motivation, reward, and pleasure. It's what drives us to set goals and feel great when we achieve them. But too much dopamine can cause burnout and addiction, while too little can make us lose motivation. Understanding how dopamine works in ourselves and our teams is key. It's important to celebrate achievements, set realistic goals, and create a workplace that values both hard work and the happiness that comes from accomplishing things. Here are some tips to boost dopamine:

- **Set Achievable Goals:** Break big tasks into smaller, manageable goals. Each time you achieve a goal, you get a dopamine boost that keeps you motivated all day.

- **Celebrate Small Wins:** Always celebrate your successes, no matter how small. Whether you finish a report or complete a workout, celebrating can trigger a release of dopamine. There's nothing like ticking something off your to-do list!

- **Acknowledge the Imperfections:** Often, we focus only on success, but it's also important to talk about challenges and how they were overcome. By discussing these openly and accepting imperfections, we encourage learning and growth.

- **Listen to Uplifting Music:** Make a playlist of your favorite positive songs. Music that lifts your spirits can also increase dopamine in your brain.

Endorphins: Stress Relief and Bliss

Endorphins are our body's natural stress fighters. They kick in during exercise, laughter, and happy moments. Think of them as your personal stress busters, helping you handle challenges and stay resilient.

To build a strong team and a positive workplace, try these ideas. They not only improve individual well-being but also create a shared sense of happiness in your team:

- **Regular Exercise:** Get moving with activities like running, cycling, or high-intensity interval training. Endorphins are released during continuous physical activity, working as natural painkillers.

- **Laughter:** Laughing is a great way to boost endorphins. Spend time with coworkers sharing fun and uplifting talks, not just work-related discussions.

- **Meditative Breathing:** Try meditation, yoga, or focused breathing to relax. This can trigger endorphins.

If meditation isn't for you, try being mindful during everyday activities, like when you eat.

- **Massage or Acupuncture:** Consider a massage or acupuncture. These treatments press specific points on your body, encouraging endorphin release and helping you relax naturally.

Oxytocin: The Glue of Social Bonds

Oxytocin plays a key role in workplace relationships. It acts like glue, building trust and improving teamwork. Imagine it as an invisible thread that sews a team together, making a strong network of connections. Encourage open communication, team-building activities, and a culture of support. The oxytocin ripple effect will strengthen connections and build your team's collective resilience.

To create a positive work environment and boost oxytocin, try these tips:

- Quality Time: Spend meaningful moments with coworkers, friends, family, or pets. Social interactions boost oxytocin, helping us feel connected. Eating together is a simple, effective way to strengthen bonds.

- Pet Your Dog/Cat: Interacting with a pet can increase oxytocin. It deepens your bond with your pet and makes you feel closer.

- Volunteer as a Team: Give back to the community with your team. Choose causes that matter to your team to strengthen your bonds and enhance engagement. Allowing team members to pick the causes can increase their commitment to the activity.

Cortisol: The Angel and Devil on Your Shoulder

Let's discuss cortisol, often seen as the stress villain. In the right amount, cortisol is like a survival coach, getting us ready to act when we're stressed. It's the alarm system telling us, "Hey, pay attention!"

However, if cortisol levels stay high too long, it can cause mood swings, anxiety, and throw off our brain's chemical balance. It's important to notice signs of ongoing stress in your team. Here are some ways to manage stress, value work-life coherence, and care for your team's well-being:

- **Regular Physical Activity During the Workday:** Set up routines for walking meetings or lunchtime exercise sessions. Taking time away from the office helps decompress throughout the day.

- **Quality Sleep:** Make good sleep a priority. Develop a relaxing bedtime routine, cut down on screen time before bed, and make your sleeping area

comfortable to help manage cortisol.

⌘ **Stress-Reducing Hobbies:** Take up hobbies that calm and refresh you. Reading, gardening, or painting can all help lower stress and keep cortisol in check.

Harmonizing the Chemical Symphony in our Brains

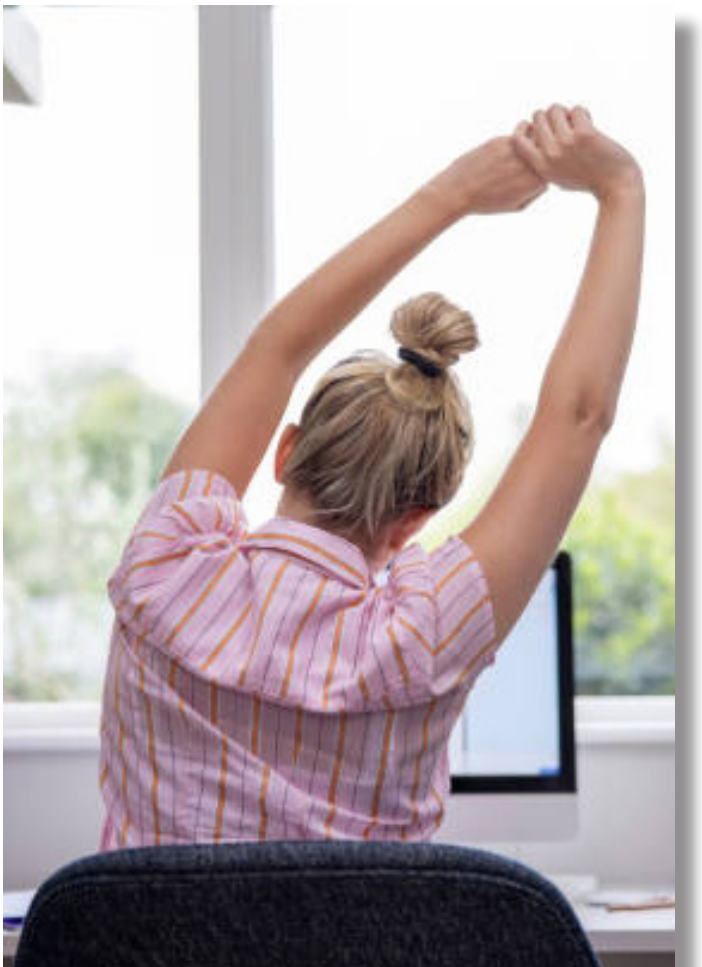
Balancing these brain chemicals isn't about making big changes but about creating a supportive environment at work and home. It's about caring for your mental health and setting a good example for those around you.

As a wellness consultant, I've seen how small shifts can make a big impact. One company I worked with changed its performance reviews to focus more on employee wellness rather than just productivity metrics. This small shift had a significant impact on the collective mental health of their teams.

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Personally, spending time at the dog park with my puppy helps me reset. It keeps me grounded and sparks my creativity.

Our world is busier than ever, full of noise and distractions. It's crucial to make space for our well-being and that of our loved ones. Remember, just as we started by diving into the busy world of life, let's end by acknowledging that both our workplaces and homes are where the dance of these brain chemicals plays out daily. We don't need a perfect performance, but a place where everyone feels supported, valued, and ready to give their best. This isn't just about surviving the whirlwind of life; it's about thriving in it.







Brain Breaks and Belonging:

Good for yourself and your connection to others

By *Demetra* Mylonas

Imagine for an uncomfortable moment that you are 'that kid'. Imagine that all or most of your peers and classmates can switch from options to academics, from lesson to lesson, with no apparent debilitating issue. Imagine that you cannot. Imagine you have difficulty planning your work or what you're going to say, or knowing what you should be doing, but for some reason, you cannot control yourself.

You may have learned some strategies, but what does that do to your sense of self and your sense of belonging, if you are one of a few, or worse, the only one who must do things differently, just to cope? Even more tragic, who would want to be friends with 'that kid'?

This heartbreaking scenario is disastrously all too common. Classroom communities are comprised of many kinds of learners and many different personalities and characteristics. A sense of belonging means feeling like you are an integral part of your class and your school. To feel this shared connection, all members must feel that there is a mutually beneficial commitment to being together.

There are many methods and programs that promote school belonging, yet problems may arise for students who require more support with their own regulation, such as those with mental health concerns or neurodivergent learning profiles. When a student feels like they are an outsider, their mental energy is used up monitoring for threats and barriers. This leaves no cognitive strength left for social engagement or academics, pushing our student even further away from attaining connection to their school or community.

A whole host of developmental, neurological or psychological reasons exist that would characterize someone as having neurodivergent or challenging mental health needs. These motor, social, sensory and attention issues are diagnosed in childhood and persist into adulthood.

These students may exhibit difficulties in remembering and organizing information, planning, controlling their actions and attentions, and have social and sensory difficulties which make learning difficult and make friendships and collaboration with peers even more challenging. Making connections with others requires finesse in processing emotions of self and others, remembering details and staying focused on a task or situation.

Relationship building requires thinking about what you are going to say before you say it in order to ensure your words are kind and pertinent to the present situation and adapting to sensory changes as the social situation moves from one task to another, or one topic of conversation to another. For brains that are wired differently, learning in a social environment is just plain hard and frustrating.



Of course, there is hope and of course these brains are strong and able, and children do a fantastic job of learning all the great strategies and tools they need to overcome the demands placed on them. The tricky part is teaching and using these strategies when they are needed and in a way that does not ostracize that child further.

Being able to recognize and monitor task demands and to respond appropriately and flexibly is the definition of self-regulation. More specifically, self-regulation requires the ability to stop and think about what you are doing, then to plan your response and then continually monitor your progress. To be able to self-regulate, development of self-awareness is mandatory.

Self-awareness is the recognition of "who am I" and "how do I think, feel, say and do". It is the skill of becoming our own observer of our own self and how this practice helps us to be in control of our own selves. The Collaborative for Academic and Social Emotional Learning (CASEL) endorses many classroom social emotional learning (SEL) programs that use mindful awareness techniques to transform brains.

These SEL programs have helped students gain increases in self-awareness, self-management, social awareness, relationship skills and decision-making. The results have been indisputable: in addition to academic achievement and prosocial skills development, there have also been decreases in misbehavior and mental health decline.

Students who have the advantage to receive this SEL training have lower stress levels and rates of anxiety and depression, and due to this improved mood, they sleep and eat better, which helps them have less fatigue in school. In populations of children with learning disabilities, especially attention deficit disorders, there is evidence of lower rates of emotional disruption. Paired with lower bullying rates seen in schools that implement mindful awareness training, students are set up for better connections with their peers.

When children can manage their emotions and think about their decisions, their ability to work collaboratively and build and maintain friendships improves. This management function, also known as self-regulation, is promoted by, and learned effectively through the purposeful and explicit practice of brain breaks. Brain breaks are a vital aspect of many SEL programs because these breaks allow students to energize their minds and free regions in their brains that aren't functioning correctly due to stress and cognitively challenging work.



The brain has a chance to process and prepare through either calming, waking, or focusing moments. Students report feeling happy and relieved from everyday classroom stress and so look forward to engaging in different mindful brain breaks. The result is students with more active attention, concentration, and engagement, which not only boosts overall productivity, but also helps with coping and a sense that life is meaningful.

One of the main facets of a brain break is the practice of mindful breathing. During this breathing practice, students are taught to focus on their breathing and to notice when their mind is wandering away. Without judgement of how they are performing, they are invited to bring their mind back to the present moment and continue focusing on their breath.

As the student learns many different breathing strategies, the mindfulness

work can move to other parts of their body, their thoughts, items of observation and the powerful force of being present in the moment. SEL programs, such as MindUP © for example, teach students how this focused awareness affects their brain and nervous system.

This program suggests teaching and practicing at least three breathing brain breaks every school day so that with continued practice, students are learning how to either calm down or energize when they need to. The beauty of this SEL program is that everybody in the classroom community is engaged.

Everyone benefits from learning ways to self-regulate, and most especially, our students with unique needs. To add to this benefit, our neurodivergent learners or our students with mental health concerns are not singled out.

Through the practice of these brain breaks as part of an intentional SEL curriculum, we are building each learner's self-awareness, which is the first step to inclusion. The mindful awareness which ensues as part of the whole SEL curriculum enhances our sense of connection.



As loving educators, we are being intentional about how we structure our classrooms to encourage a sense of belonging, so that children feel that they are an integral part of the class.

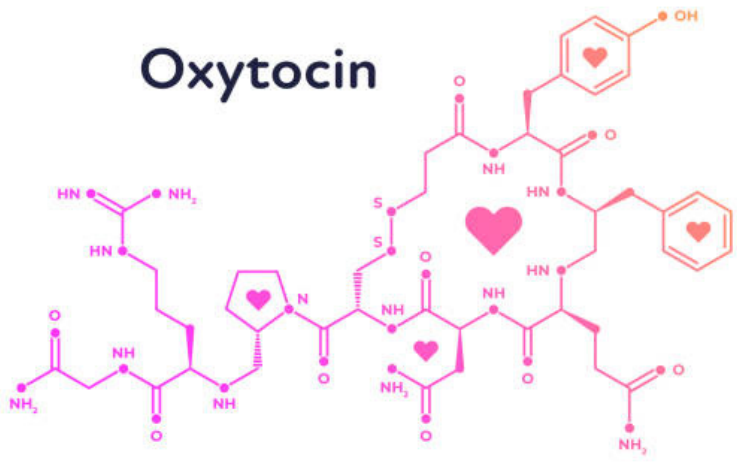
When students feel like they belong, they are more likely to participate in discussions and activities, attend class regularly, collaborate on projects, stay in school, and seek help when they need it. These trusting relationships activate regions of the brain associated with stress reduction and happiness.

The neurotransmitters that are released when a person feels happiness and connection, such as oxytocin, dopamine and serotonin, have positive effects on one's mental, physical and emotional health. These are all powerful protections against depression, sickness and anxiety. The intentionality of teaching students how their brains work, how to regulate themselves and how to be mindful and attentional in their actions and words, sets up the learner for practicing how to be non-judgmental, kind, gracious, empathic and respectful.

This joint learning of these wonderful skills, all together in a child's classroom and school, with all their peers, is the foundation of connection and belonging in schools.

Now 'that kid' is the kid who is good at drawing. 'That kid' is the one who can help his or her peers with math. 'That kid' is the one who can lead the class in a brain break. 'That kid' now has allies and peers that understand his/her neurodivergent needs or mental health concerns. 'That kid' now has a friend or two. 'That kid' feels like an integral part of the classroom; because of course, they are.







Good Food for a Good Mood:
The Gut-Brain Axis Connection

By Dylan Dean

Welcome to the fascinating world of gut health and its surprising impact on our mental well-being! You've probably heard the saying "you are what you eat," but what if we told you it's more like "you think what you eat" or "you feel what you eat"?

Current research is uncovering an incredible connection between our gut health and our mental clarity, proving that what we put in our bodies can significantly affect our brain's performance and our emotional and mental states. This connection is known as the gut-brain axis.

Picture this: inside our gastrointestinal tract, there's a bustling community of trillions of bacteria, both good and bad. These bacteria play a crucial role in breaking down our food, absorbing nutrients, and keeping inflammation in check, which in turn supports our immune system.

But that's not all – they also produce neurotransmitters, like serotonin, which acts as a messenger between our gut and our brain.

Serotonin is a key player in regulating sleep and mood. So, when there's a glitch in the communication between our gut and brain – due to an overgrowth of bad bacteria – our brain might not receive the full message due to resulting inflammation. Inflammation presents like gas, bloating, and diarrhea in the gut, and brain fog, fatigue, irritability, and low mood in the brain. In fact this imbalance- or dysbiosis- of gut bacteria is directly associated with conditions like Seasonal Affective Disorder, depression, anxiety, chronic pain, and fibromyalgia.

Dysbiosis is caused by too many toxins taking up space over the good bacteria we require to stay healthy. Refined sugar and processed foods are two of the largest culprits to create more bad than

good bacteria. When we consume too much sugar our body responds with a spike in blood sugar. This spike triggers the release of a hormone called cortisol, which usually helps regulate our blood sugar levels and is vital in regulating our stress response.

However, if cortisol is forced to be released continuously due to ongoing dysbiosis, we are essentially putting our bodies in a constant state of stress causing a myriad of physical issues and a decline in any or all of these functions of the brain:

- Attention
- Working memory
- Problem-solving
- Self-control
- Resilience
- Emotional regulation
- Organization
- Decision making

But fear not, there's hope! By nurturing our gut microbiome, we can unlock a world of physical, mental, and emotional rewards. So, what's the secret? It's all about making smart choices in what we eat and how we live:

1. Whole Plant-Derived Foods:

Think colorful fruits and veggies – they're packed with essential nutrients



and fiber that support a healthy gut.

2. Fermented Foods and Probiotics:

These goodies introduce good bacteria to your gut, promoting digestion and overall gut health. Kombucha, kefir, miso, kimchi, and yogurt are all great sources of healthy fermented foods. Taking a high-quality daily probiotic is an excellent start to supporting your gut health.

3. Omega-3 Fatty Acids:

Found in fatty fish like salmon and found in supplement form, omega-3s support cognitive function and mood regulation- especially when your healthy gut is processing them optimally!



In addition to having the ideal nutrients, we can reduce stress and boost mood in these ways:

A. Nature and Exercise:

Spending time outdoors and staying active not only reduces stress but also promotes a diverse microbiome in doing so.

B. Healthy Relationships and Boundaries:

Cultivate positive connections and set boundaries to reduce stress and support mental well-being.

C. Mindfulness and Awe:

Practice mindfulness and seek out moments of awe to lower stress levels and boost overall happiness. Finding moments of gratitude make a tremendous difference to overall health and well-being.

By incorporating these practices into our daily lives, we can nourish our gut, lower stress, enhance our brain function, and embrace a happier, healthier lifestyle. So, let's embark on this journey to gut-brain harmony together – your mind and body will thank you for it!



I never antagonized her depression. If she wanted to sleep, I let her. If she didn't want to do online learning, I let her. I simply allowed her to float in whatever she was floating in. I never thought this was the right thing to do - this was my own personal response - that's all I knew. I simply prayed with my self-imposed stillness.

In August of 2022, I came across a Guardian article that changed everything. Just by reading the title, I fully understood the author. I also fully understood what I did–even if most of it was done subconsciously.

Even though it looked like I should've seen the beauty of math, since my father is an author of books about the happiness of mathematics, and how math should be seen as beautiful. But that was not my perspective at all. I am sure that must have made my father feel sad.

We have lost our way with mathematics.

Its beauty and restorative magic have been co-opted, marginalized, and as a result, shaded into virtual obscurity. It's become a commodity to be valued for external purposes and validation to

"A moment that changed me: a math puzzle taught me to use my brain, and helped me cope with losing my daughter"

Mathematics helped me cope with Raya's debilitating mental health. The very own words I wrote in Chasing Rabbits now tested me to see if it was all idealistic folly. It wasn't. But, for the most important person in this story, my daughter Raya, mathematics was none of this.

Raya...

My relationship with math during this interval of time was not the best either, it is fair to say that I hated math and had no interest in it. School was undoubtedly a reason for why I disliked math.

function in society. It has no internal value. The Shakespearean irony of it all is that it saved my mental health. And now in 2024, it is saving Raya's as well.

As I mentioned, I hated math and I didn't have any attraction to it, which was evident as I sank in my own sadness, drawing me away from the beauty of math that my father tried to show me. However, he fully understood why I couldn't get myself to enjoy doing math, which I appreciated. I knew it would take time for me to immerse myself in the joyfulness of mathematics again. Because I did really like math

when I would do it with my dad when I was younger, solving harder problems than my level, doing math at parks with him, and at my grandparent's house.

It is all very vivid to me still, but engaging in math faded as I became depressed. But, fast forwarding to when I was slowly realizing each day was getting better for me, I was perceiving math differently, especially algebra, which is often a source of anxiety for most students. But doing algebra was different from most of the math that school had taught me. I actually sat down and enjoyed doing it! Odd, I know.

My father showed me intricate ways of doing and looking at algebra, even though I was only in the beginning of grade 9. Algebra now for me, is something I know like the back of my hand. I do it without any hesitation, as I understand the logic of algebra. And I am not just saying that because I am good at it, but because I love it. When you love to do something, you find yourself wanting to be better at it, which is the way I like to think of it.

In addition, when I was depressed, something I would always turn to was music. Always. I cannot describe the utmost happy relationship I have with music, as it is a part of me. And I am happier because of music.

It is something that aided me along the journey of when I was at rock bottom. I feel like music is one of the biggest reasons as to why my father and I have bonded over the last few years.

We connect like a couple of old dudes when we talk about music, even though there is a 45 year age gap between us, and I am his daughter. This father-daughter relationship of ours is so rare. It took depression and being a teenager, but I finally understand why my father sees mathematics as "music for the mind".

Sunil...

I read Raya's last entry in this article several times. I am a bit speechless, and I am grateful to be caught off guard with the wisdom of my daughter. A practical one she inherited from her amazing mother, who is battling a painful, auto-immune disease ankylosing spondylitis, and a philosophical one from her idealistic, always romanticizing father.

Algebra - a historical treasure of mathematics. It's not ironic that it has been part of Raya's journey towards a light of uncompromising connection and promise. Mathematics has a long history of providing comfort, hope, and inspiration in our darkest times–death



beds, concentration camps, incarceration, and suicidal ideation.

It's time that education prioritizes the overwhelming mental health benefits of mathematics by prioritizing the mental health of all our students. We need mentally vibrant students and vibrant mathematics for the future. As such, we need education to create the space for these humanizing ideas to flourish - today.

Sunil and Raya will be giving the opening keynote at the 2nd Annual Wellness Education Summit in Banff, Alberta in 2025

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