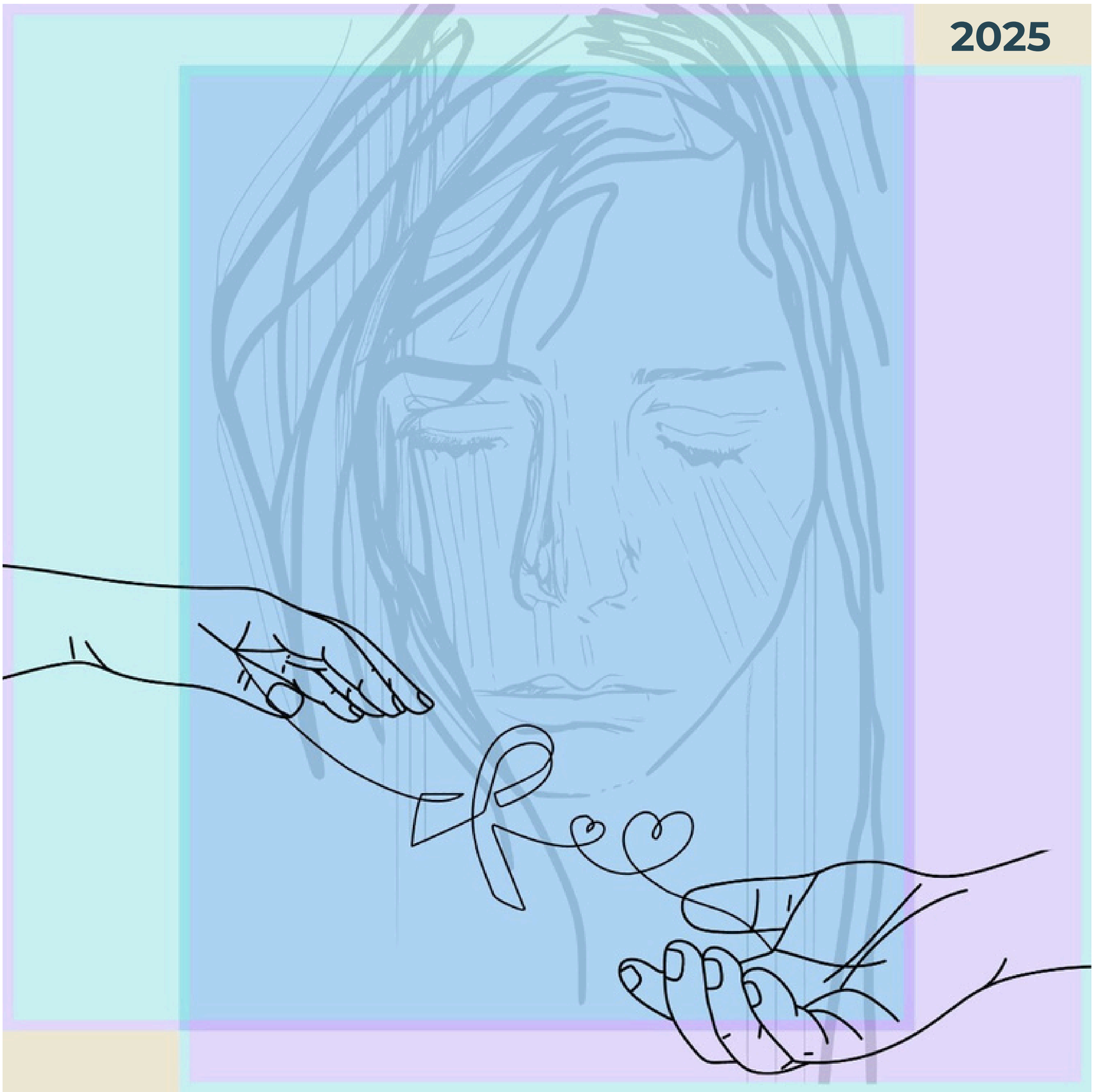
BRIDGING THE DIVIDE



Exploring the relationship between NCDs and mental health and wellbeing for children, youth and families.

THE MHPSS COLLABORATIVE

CPC LEARNING NETWORK

COLUMBIA-WHO CENTER FOR GLOBAL MENTAL HEALTH

COLUMBIA | MAILMAN SCHOOL OF PUBLIC HEALTH

Editors: Louise Juul Hansen, Victor Ugo (MHPSS Collaborative) Sabrina Hermosilla, Lisberma Peralta Aquino (Columbia University Mailman School of Public Health)

Design: Louise Juul Hansen, Lisberma Peralta Aquino

Frontpage art: Anukrati Nigam

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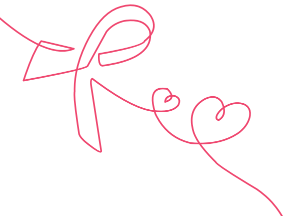

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Foreword

Children and young people living with noncommunicable diseases (NCDs) too often shoulder a double burden: the management of a chronic condition and the oftentimes less visible weight of its psychosocial toll. Imagine the asthmatic child who sits out of play, the teenager calibrating insulin while concurrently experiencing symptoms of depression, the displaced family negotiating for medication amid dislocation and loss. Rather than isolated phenomena, these are interwoven dimensions of a singular human reality. Yet, our health systems routinely partition them, treating body and mind as autonomous domains.

Bridging the Divide was born out of this disconnect. It is a collective undertaking to reframe how we see, study, and respond to the entwined realities of NCDs and mental health for children, young people, and their families. Within these pages, caregivers, young people, practitioners, researchers, and advocates speak with clarity and urgency. Their contributions, grounded in evidence and lived experience, show that siloed approaches extract a cost measured in both inefficiency and human suffering. Integration, by contrast, offers a more humane and holistic approach to prevention and care that appropriately responds to the lives that children, young people, and families actually lead.

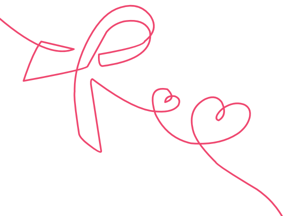
What emerges is a knowledge canvas. Field testimonies sit alongside research, creative expression alongside policy insights, each reinforcing the same message: to address NCDs in isolation from mental health—or vice versa—is to misconstrue the experiences of those most affected. Nowhere is this failure more consequential than in humanitarian and resource-constrained contexts, where enhanced vulnerabilities demand innovative and integrated care as a moral and practical imperative.

This compendium calls us to choose differently; to think across boundaries, design with foresight, and act with both rigor and compassion. For policymakers, it offers direction; for practitioners, concrete guidance; for funders, a vision for sustainable impact; and for families and communities, affirmation of what they have long known: that healthcare, to be effective, must be comprehensive.

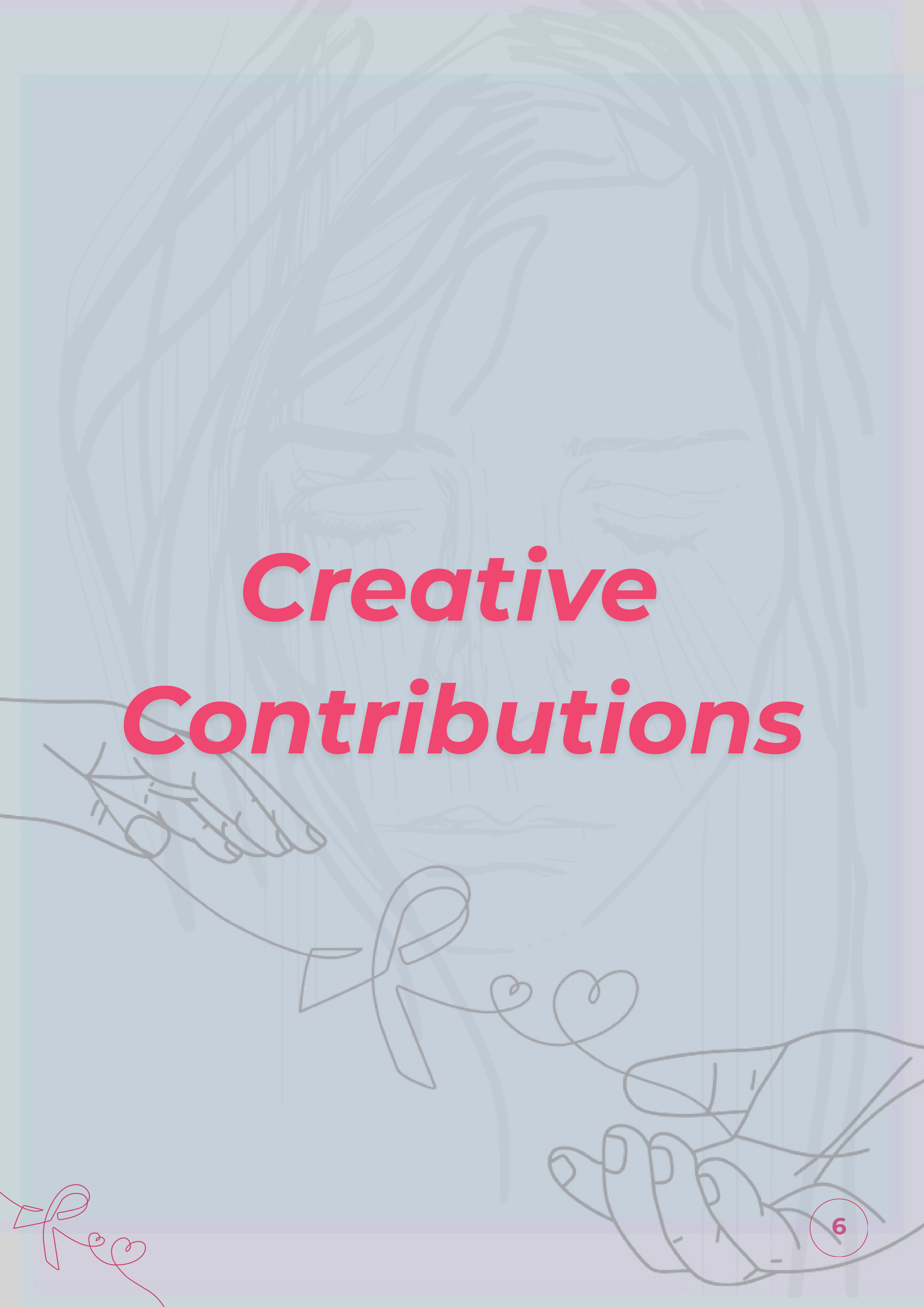
Children, young people, and their families have navigated this divide for far too long. Our task is clear: to bridge it.

Marie Dahl
Director, MHPSS Collaborative

Sabrina Hermosilla, PhD
Assistant Professor, Columbia University

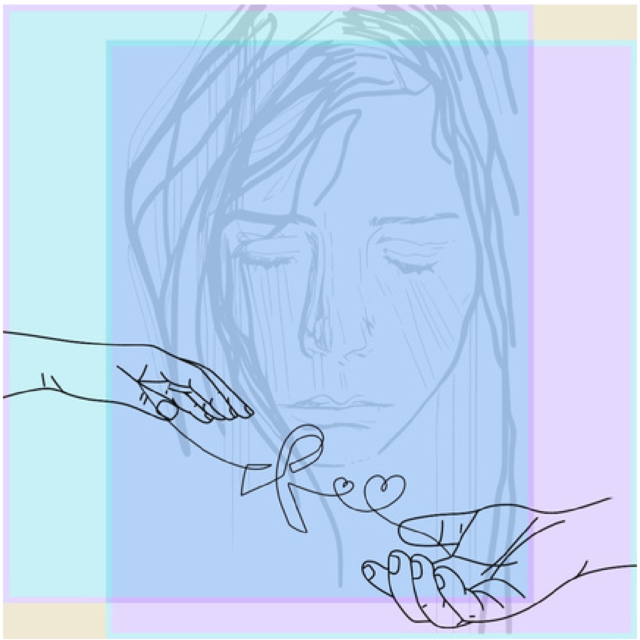


Creative Contributions



Cover Artwork

Author: Anukrati Nigam



This drawing intends to highlight the use of an empathic approach towards mental health. The teal and purple color corresponds to the colors of the ribbon of suicide prevention. The Sepia color refers to the lives that have been lost due to death by suicide. Furthermore, it highlights how there must be a collaborative effort to ensure awareness about suicide prevention, reduction of stigma about mental health, and that people should be treated with love and empathy.

The intersecting lines of purple and teal are added to reduce the notion of gender conformity of suicide to a single sex. The lady in the center represents the state of emotional conflict that a person with mental health issues or a caregiver or a friend of a person with mental health issues face.

What is the appropriate way to reach out for help? Can the health system cater for the person suffering without posing additional financial constraints? The lady also represents those people with NCDs who develop mental health conditions as comorbidities.

The closed eyes and the pursed lips highlight the dilemma in receiving appropriate care and the inability of self continuity which a person with a NCD wants in their life - to be able to carry on again.

So, the quintessential question remains: what can we do about it?

Whether it is battling with mental health stigma or going through tough times, it is a call to the people to help each other out and be there for one another. If we can do one thing daily, it is to BE KIND.

Author's Note: This artwork was created on Canva Pro which the author has licensed access from at the time of creation of this piece. This artwork does not include any use of generative AI tools.

Hope, Interrupted—But Never Erased

Author: Naumika Khanna

“As a child with NCDs and a lover of Barbies, I used to worry more about packing glucose strips than dressing up my dolls. While my classmates exchanged lunchbox treats, I was counting carbs. Birthday parties meant scanning for sugar-free snacks; school trips meant worrying whether the teachers knew what to do if I had a seizure. While my friends played hide and seek, I was learning how to care for my hypoglycemic and hyperglycemic episodes.

So, childhood, for me, was a constant negotiation between joy and survival. But I believe childhood shouldn’t come with syringes and tears. It should be filled with classrooms that accommodate medical needs without stigma, playgrounds where no child is left out because of their diagnosis, and friends who understand why you carry a kit instead of candy. ***True inclusion and equity*** *means that every child—regardless of their condition—feels safe, seen, and can express themselves freely.”*

I am **Naumika Khanna**, and I was diagnosed with **Type 1** diabetes at 7, **hypothyroidism** at 8, **epilepsy** at 15, and underwent a **failed major neurosurgery** at 23, where **11 parts of my brain were burned**. Each diagnosis came with a new medical label and associated grief. Managing NCDs isn’t just about popping a magic pill, but also about the mental health consequences that follow them.

Type 1 diabetes is not simply a condition; rather, it’s a **24/7 battle**. It means waking up to treat lows, carrying supplies, and constantly calculating carbs. People from all walks of life face crisis-level decisions daily, leading to **diabetic distress,** i.e., the psychological toll of ongoing management, marked by anxiety, frustration, and burnout that affects self-care and mental health.

“Sometimes, I wish people understood that epilepsy isn’t who I am—it’s just one part of my story.”

Seizures strike without consent, and recovery goes beyond the physical—it's also psychological and social. For teens with epilepsy, the real battle is against stigma, loneliness, and being misunderstood by society—they hurt more than the seizures themselves.

As I’ve grown older—and perhaps braver—I’ve come to understand that I am not alone. I am one among millions of young people navigating life with a noncommunicable disease. What once felt like an isolated burden has revealed itself as a quiet epidemic. NCDs like diabetes, asthma, epilepsy, childhood obesity, and heart disorders are no longer confined to adulthood—they have seeped into our innocent years, stealing the joy of millions. ***Behind every schoolbag may lie a hidden story like mine—tucked between textbooks are traumatic memories of inhalers or insulin pens, which creep to form psychopathologies of adult life.***

Today, I do not speak only for myself. I speak for every young person walking this ***precarious tightrope***—balancing doctor's appointments and academic deadlines, stigma and all while mustering up silent strength, we may still be labeled ***"different,"*** but our stories are no longer anomalies. They are everywhere—urgent, aching, and ready to be heard.

And the numbers ***are no longer whispers—they roar.*** Noncommunicable diseases claim over **41 million** lives each year, with **15 million** of those deaths occurring in people between the ages of **30 and 69** (World Health Organization, 2023). Over **80%** of adolescents fail to meet recommended physical activity levels and are increasingly surrounded by ultra-processed foods, creating the perfect storm for both physical illness and the psychological anguish that shadows it—anxiety, depression, burnout (World Health Organization, 2023). I know this truth intimately. Children like me—living with Type 1 diabetes and epilepsy—***are twice as likely to experience depression and anxiety*** (National Institute of Mental Health, 2022). We carry our diagnoses not in plain sight, but deep within us, often unseen—yet unbearably heavy.

The invisible burden of NCDs is carried by caregivers, too. My mother wakes up multiple times just to check if I'm still breathing. She listens to the silence of the night, not for peace, but for signs of danger. Her love is constant, but so is her fear. She has carried my childhood on her shoulders while quietly sacrificing pieces of her own. A cross-sectional study of **221 caregivers** of children in India with neurological illnesses reported high levels of psychological distress, depression, and caregiver burden, such as **70.6%** expressed extreme sadness just at the child's diagnosis, **59.3%** neglected their health, and **9.0%** became physically sick due to **caregiving strain** (Roy *et al*., 2018). I often ponder about my mother, my only lifeline. She carries the weight of my NCDs quietly, while most health systems treat her like they're ***just a bystander*** due to the lack of proactive insurance policies.

I believe we are more than our diagnosis; we are artists, students, siblings, and dreamers. To bridge this gap, we must integrate mental health services into every touchpoint of NCD care—schools, communities, and clinics. Storytelling initiatives, youth-led dialogue circles, culturally inclusive healing practices, and digital mental health support can offer powerful solutions. Training frontline workers to recognize early signs of distress is key. My involvement in advocacy, through partnerships with organizations like UNICEF and the Diabetes Fighters Trust, among others, has taught me to be more assertive—to speak up for myself and to stand up for those whose voices are still unheard. It showed me the power of integrating physical and mental health as equally important, shifting the focus from mere survival to true resilience and thriving. ***My advocacy journey around mental health, type 1 diabetes, and epilepsy across India and abroad has made me strong enough that whenever society asks, "What's wrong with you?" I smile and say, "Nothing—except how strong I've had to be. You see illness; I see strength."***

We need a health system rooted in equity—one that sees mental health as essential, not optional, especially for young people and caregivers living with NCDs. Policymakers must integrate mental health screenings into routine care, fund community-based programs, and establish support services in primary health centers. Schools should train teachers to recognize distress, create peer-led mental health clubs, and offer regular on-site counseling. Communities can bridge the gap through peer networks, digital tools in local languages, and culturally rooted practices like storytelling and mindfulness.

We don't want sympathy—we seek empathy, dignity, and meaningful support from every layer of society, be it our family, friends, or even significant others. Health equity should not be an option; rather, it should be a call to action to act upon NCDs.

Author's Note: *I write as a young person with lived experience, but I speak for many. This story is mine, but the struggle, the strength, and the hope belong to millions. We're not just names in old hospital reports—we are souls that demand a voice in global forums. Every policy, every program, and every training must begin with this truth: We're not just surviving—we're asking for the chance to thrive, which starts with equity.*

About the Author

Naumika Khanna, Youth Champion at UNICEF and NCD Advocate in India, believes life is like an ECG—full of highs and lows, but proof that you're alive. Diagnosed with Type 1 Diabetes at 7, hypothyroidism at 8, epilepsy at 15, and enduring a failed neurosurgery at 23, she turned adversity into advocacy. As a UNICEF Youth Delegate and NCD champion, she uplifts the voices of children with chronic illnesses. "Flatlines mean the end, so embrace every rise and fall." She advocates for mental health, digital wellness, and inclusive care and equity, striving for a world where no diagnosis limits dignity or dreams.

The Silent Burden: When the Body Hinders a Child's Soul

Author: Bonfils Yamuremye

Introduction

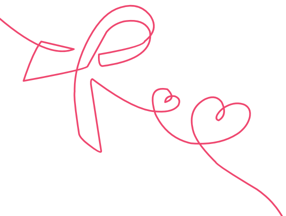
"Imagine a child whose running stops, not by choice, but by pain. A child whose laughter is stifled by an invisible evil. Noncommunicable diseases (NCDs) steal laughter and unrestrained running with hushed steps: NCDs silently steal the joys of childhood."

This is the vibrant appeal of *Silent Burden*, born from a painful observation of the double punishment and shattered identity experienced by millions of children and adolescents, just as we can see clearly in these statistical data: NCDs—including cancers, cardiovascular diseases, diabetes, chronic respiratory illnesses, and mental disorders—are responsible for 43 million deaths each year worldwide, or 75% of non-pandemic mortality (Noncommunicable diseases | UNICEF, n.d.). Of these, 18 million people die prematurely (before age 70) every year, with 82% of such deaths occurring in low- and middle-income countries (Noncommunicable diseases, n.d.).

More than 2.1 billion children and adolescents under the age of 20 live with one or more NCDs, whether congenital, acquired, or linked to risky behaviors such as a sedentary lifestyle, unbalanced diet, tobacco, or alcohol use. The burden of NCDs among children is increasing, particularly in low- and middle-income countries, where pediatric policies are still too often inadequate and underfunded (Noncommunicable diseases | UNICEF, n.d.).

This poem aims to make the invisible visible: to reveal how, when the body trembles, the spirit trembles too. It is addressed to decision-makers, health professionals, and educators: beyond medical treatment, every child needs psychological and social support to ensure that their dignity and future are not swept away by these invisible shadows. Together, by uniting science, politics and humanity, we can restore lost joy and offer every young person the chance to live a full childhood.

In this poetic way, my hope is that decision-makers and healthcare professionals will identify strongly with this intimate voice, and understand more fully that the fight against NCDs must extend beyond medical care to include psychological and social support.



A Silent Burden: When the Body Hinders a Child's Soul
Le Fardeau Silencieux : Quand le Corps entrave âme enfantine

A child grows up under an uncertain sky,
Struggling against the weight of a recalcitrant body.
Chronic illnesses, discreet shadows,
Exhaust the spirit, happiness is far away.

A fragile body, trapped by a stubborn ache,
Where energy runs out, the race fades.
Shortness of breath, persistent pain,
Steal the colors of a carefree childhood.

Friends drift away, games are no longer the same,
Isolation sets in, shadows grow.
In the child's eyes, a sadness lurks—
The weight of the body that weighs on the soul.

But deep in the child's heart, a flame persists:
Resilience, a force that insists.
The need for listening, for love, for tenderness,
For the wounded soul to regain its promise.

The child seeks a hand to hold,
A face that understands the pain.
A hope of joy, a new dream,
For life to regain its momentum.

This poem is an open window on the invisible,
On the suffering of children we cannot clearly see,
Those whose bodies are a daily struggle,
And whose hearts need help to dream.

Bridging the gap is the duty of us all:
Uniting medicine and moral support,
Giving light to these hidden stories,
So every family finds strength and unity.

Stop the silent echo of noncommunicable diseases!

Un enfant grandit sous un ciel incertain,
Luttant contre le poids d'un corps récalcitrant.
Les maladies chroniques, des ombres discrètes,
Épuisent son esprit, lointain est le bonheur.

Un corps fragile, pris au piège d'un mal tenace,
Où l'énergie s'épuise, la course s'efface.
Le souffle court, la douleur persistante,
Volent les couleurs d'une enfance insouciante.

Les amis s'éloignent, les jeux ne sont plus les mêmes,
L'isolement s'installe, l'ombre grandit.
Dans le regard d'enfant, une tristesse se cache,
C'est le poids du corps qui pèse sur l'âme.

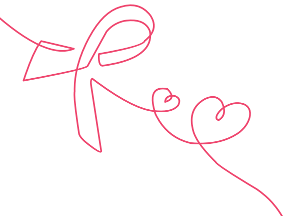
Mais au fond de son cœur, une flamme s'obstine,
La résilience de l'enfant, une force qui insiste.
Le besoin d'écoute, d'amour, de tendresse,
Pour que l'âme blessée retrouve sa promesse.

Il cherche une main pour tenir la sienne,
Un visage qui comprend sa peine.
Un espoir de joie, un rêve nouveau,
Pour que la vie reprenne son élan.

Ce poème est une fenêtre ouverte sur l'invisible,
Sur la souffrance de ces enfants que nous voyons mal,
Ceux dont le corps est un combat de tous les jours,
Et dont le cœur a besoin qu'on l'aide à rêver.

Combler le fossé, c'est notre devoir à tous,
Unir la médecine et le soutien moral.
Donner de la lumière à ces histoires cachées,
Pour que chaque famille trouve force et unité.

Cessez l'écho silencieux des maladies non transmissible!



Call to Action

Alarming figures show the extent of NCDs among children. But beyond the data, there is a silent pain that we don't always hear: that of a child whose body suffers, and whose mind closes in. The poem *The Silent Burden* is a voice for these children—a voice that calls us to look beyond the physical symptoms and hear the anxiety, isolation, and loss of confidence they experience every day.

This text is not just a poetic work. It's a call to action.

To our governments: It's time to make children's health a top priority. This means adding clear targets for their care, and ensuring that every child living with an NCD is monitored, accompanied, and supported in his or her daily life.

To our healthcare leaders: We call on you to support families, not just with medical care, but also with listening spaces, tailored therapies, community support, and services that take account of inner pain.

To our society as a whole: Let's break the silence and isolation. Let's learn to recognize the invisible signs of suffering and celebrate the strength of children who go forward in spite of everything.

About the Author

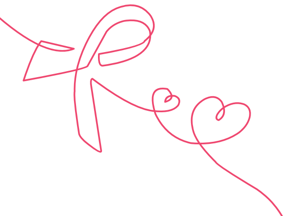
Bonfils Yamuremye, born in Bujumbura (Burundi), is the second of three siblings. After successfully completing his secondary education, he continued his studies at the University of Burundi, where he obtained a Master's degree in psychological sciences. Passionate about listening to and accompanying people in distress, he coordinated a research project on gender-based violence in community settings. His commitment doesn't stop with research: he devotes his free time to mentoring young people and educating children in civic values. Single and deeply attached to his community, Bonfils aspires to inspire change through concrete, humane action, developing services that support families, give a voice to the invisible and strengthen social ties.

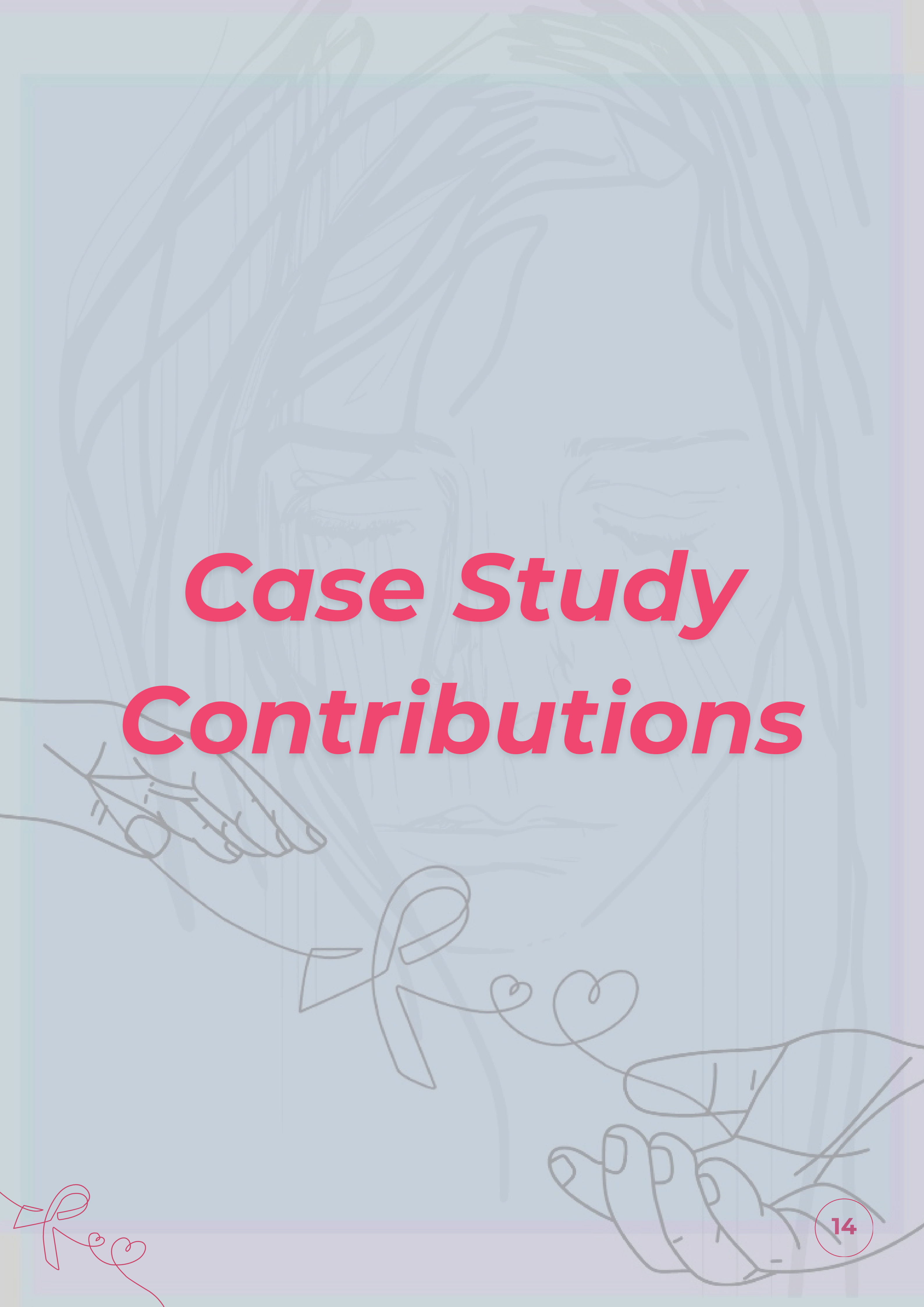
Profile

- Title: Counselling psychologist (clinician) & Master's degree in psychological sciences
- Affiliation: Association “Peaceful Peer Psychologists - 3P Inkingi”; Club SOUFRA

Areas of expertise

- Mental health and psychotherapeutic practice
- The art of creativity (liberation of the spoken word).





Case Study Contributions

Integrating Mental Health into NCD Care in Papua New Guinea: A Community-Based Approach

Author: Enjo Sepik

Papua New Guinea is a nation of immense cultural and linguistic diversity, with over 800 languages and communities scattered across challenging mountainous terrain and remote islands. Geographic isolation, political instability, and limited infrastructure make the delivery of health services difficult.

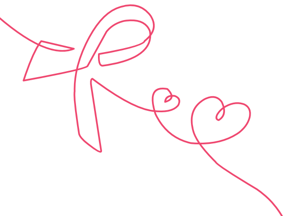
Historically, mental health services have been underdeveloped due to limited and inconsistent government funding, urban-centric resource allocation, a scarcity of trained professionals, and deep-rooted cultural stigma often linking mental illness to sorcery or moral failing. Until recent years, Papua New Guinea lacked comprehensive national mental health policies, and mental health was rarely integrated into primary care, leaving rural and conflict-affected populations without access.

Background and Context

Noncommunicable diseases (NCDs) such as diabetes, hypertension, and cardiovascular illnesses are increasing in Papua New Guinea, placing strain on an already fragile health system. Mental health challenges—particularly depression, anxiety, and trauma—remain under-recognized, especially among children and youth.

Between 2021 and 2024, I led and supervised a community-based program through my private practice, Taike Psychological Consultant Firm, in collaboration with local schools, health facilities, and faith-based organizations. The program integrated mental health into NCD care for children and youth living in the Enga and Jiwaka provinces.

These provinces were selected due to their high NCD prevalence and significant levels of psychosocial distress. They also include remote and conflict-affected communities, making them important sites for testing scalable, adaptable interventions. Importantly, existing provincial health partnerships and the willingness of schools and churches to collaborate created a supportive foundation for implementing the program.



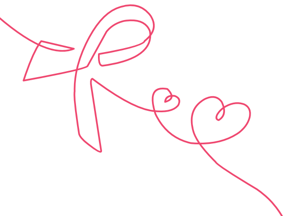
Program Design and Implementation

Interventions were delivered via schools, health facilities, and faith-based organizations. Program design placed a strong emphasis on cultural responsiveness, adapting mental health interventions to the local context through the use of storytelling and metaphors. For instance, in Enga, we used the metaphor of a “garden” to explain mental well-being—emphasizing care and maintenance; in Jiwaka, elders likened healing to “mending a bilum” (a woven bag)—repairing threads one at a time. These adaptations made psychological concepts more accessible.

Building capacity was central to the project. We trained over 40 health workers and lay counselors in psychological first aid, emotional screening, and trauma-informed care. Sessions were typically conducted over one to two days and scheduled monthly across different locations to ensure consistency without overburdening staff. Teachers and faith leaders were also trained to identify emotional distress, provide first-line support, and make referrals. To reduce workload strain, training modules were designed to be short (30-45 minutes), flexible, and often delivered during routine staff briefings or debriefs.

Furthermore, twenty-five support groups, including peer-led school sessions, were held in Tok Pisin and local dialects. Youth peer supporters helped lead group discussions, which improved trust and participation. Psychoeducation modules, co-developed with community members, reduced stigma and built emotional literacy, enabling sensitive topics such as trauma and chronic illness management to be discussed openly. Youth with severe distress were referred for individual counseling or linked to provincial services. Referrals were followed up by school counselors or community health workers to ensure uptake. Where barriers emerged, such as fear of stigma or long travel distances, additional support was provided, including accompaniment by trusted adults or arranging sessions in neutral, community-accepted locations.

We partnered with local radio stations and churches to disseminate key mental health messages and NCD prevention information. Across the full implementation period, over 250 children and youth participated in various program components, including psychoeducation sessions, support groups, and individual counseling. Outcomes were assessed using pre/post surveys, validated emotional regulation scales, treatment adherence logs, qualitative teacher/health worker feedback, and focus group discussions.



Results

78% of participants reported better emotional regulation, with many describing themselves as “lighter” or “less angry” after attending support groups. Among 36 youth with diabetes or hypertension, 81% improved medication adherence and reduced missed appointments. Teachers observed enhanced classroom focus and participation, while health workers reported greater confidence managing mental health concerns. Churches and schools became trusted access points, increasing self-referrals. Six months post-training, 85% of health workers were still applying mental health and psychosocial support (MHPSS) skills.

The impact was also captured in personal testimonies, with the parent of a 12-year-old with migraines stating, “my daughter’s headaches made school hard, but with the health workers’ help, she understands her condition better and feels hopeful.” A 16-year-old participant concurred the feeling, stating, “learning to talk about my feelings helped me take control of my epilepsy and school life.”

One 14-year-old participant shared, “*I thought being sick with diabetes was a curse. But now I know it’s not my fault, and I can manage it with support.*”

Challenges and Adaptations

Stigma initially reduced engagement. We addressed stigma through sustained community dialogue, leadership endorsement, and reframed language (e.g. replacing “mental illness” with culturally accepted terms such as “thinking problem” or “heart problem”). Difficult terrain and insecurity often disrupted activities, requiring flexible delivery, often in homes, churches, or open spaces. Workforce gaps were mitigated by embedding short training into outreach activities.

Sustainability and Policy Implications

Post-program, trained personnel and peer leaders continue support groups. Local education boards have embedded mental health into curricula. Provincial health authorities are exploring formal policy adoption. This culturally grounded model shows strong replication potential across Papua New Guinea and offers lessons for integrating MHPSS into national NCD strategies.

Lessons for Practitioners

Lessons from this experience point to key conditions for long-term impact, such as: 1) government buy-in is essential for institutional integration and scaling; 2) training a local cohort of youth-friendly mobilizers and frontline workers builds continuity;

3) community involvement ensures relevance and trust; and 4) NGO partnerships provide technical support and early-stage funding.

Ultimately, cultural adaptation fosters acceptance. Using trusted community institutions ensures reach and sustainability. Peer-led models strengthen ownership. Early policy engagement aids institutionalization. This culturally grounded model offers important lessons for integrating MHPSS into national NCD strategies.

About the Authors

Enjo Sepik is a licensed psychologist and Independent Psychological Consultant at Taike Psychological Consultant Firm. He has over 10 years of experience in MHPSS, particularly in trauma recovery, adolescent mental health, and community-based psychosocial interventions across PNG.
Contact: enjosepik3@gmail.com

Taike Psychological Consultant Firm Logo

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Mind Ball: A Case Study of a Sport-Based Intervention for Adolescent Mental Wellbeing and NCD Prevention in Diverse Kenyan Communities

Authors: Collince Alan Dundo, Winnie Ashioya, Joyce Odhiambo

Abstract

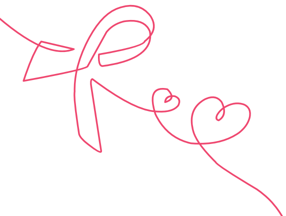
Kenyan adolescents face a dual public health challenge: the rising prevalence of noncommunicable diseases (NCDs) and pervasive, often unaddressed, mental health concerns. Conventional interventions tend to be fragmented, medically oriented, and culturally disconnected from young people's lived realities. The *Mind Ball* pilot sought to address this gap by merging mental wellbeing promotion and NCD prevention within a sport-based, community-driven framework.

Using Youth Initiative Development Program's (YIDP) *SPORT+ Wellness Framework*, the initiative integrated physical activity with structured discussions on resilience, coping strategies, nutrition, and substance use prevention. Implemented between February and October 2022 in both rural and urban Kenyan settings, the program engaged 250 adolescents and 25 trained facilitators. Employing a pre-post, mixed-methods approach, the evaluation revealed a 35% improvement in NCD knowledge, heightened peer support, and enhanced facilitator confidence.

The findings underscore the potential of sports as a culturally resonant and stigma-free platform for holistic adolescent health promotion. The pilot's success suggests strong viability for scale-up and integration into broader school and community systems.

Introduction

Adolescence in Kenya represents a critical window for establishing lifelong health behaviors (Patton *et al*., 2016). However, young people, particularly those in underserved rural areas and urban informal settlements, increasingly face a dual threat: the rising burden of NCDs and significant mental health challenges (WHO, 2022; UNICEF, 2021). Limited access to preventative health information, socio-economic pressures, and a lack of youth-friendly support services create an environment where NCD risk factors (e.g., poor nutrition, inactivity) flourish alongside mental distress (Drapeau *et al*., 2012).



Despite the deep interconnectedness of physical and mental health (WHO, 2022), most health interventions remain siloed. They are often clinically focused, delivered in formal settings, and fail to engage youth in a culturally resonant manner, resulting in low uptake and limited impact.

This paper uses a narrative approach to document the *Mind Ball* initiative. The rationale for this approach stems from a key insight: while adolescents eagerly participated in community sports, they were often absent from traditional health talks. The YIDP identified an opportunity—the playing field itself, a natural, low-stigma hub for youth, could become the classroom.

The aim of this paper is to document the implementation, outcomes, and lessons learned from the *Mind Ball* pilot, offering insights into a practical, community-driven model for holistic adolescent health promotion.

Context and Setting

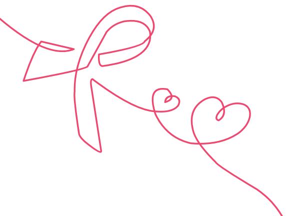
The *Mind Ball* pilot ran from February to October 2022, strategically testing the model's adaptability in two contrasting settings: a rural school in Homabay County and urban informal settlements in Nairobi. The initiative targeted 250 adolescents (ages 10-17), ensuring gender inclusivity and safe discussion spaces for all.

A key component was training 25 local facilitators (teachers and community coaches) to deliver the program. This dual-beneficiary approach was designed not only to directly serve youth but also to build sustainable local capacity, embedding skills and knowledge within the community for long-term impact.

Narrative of the Intervention

The *Mind Ball* initiative is a story of co-creation and adaptation, built on the *SPORT+ Wellness Framework* to deliver an integrated health curriculum through popular sports. Participatory workshops ensured cultural relevance, while weekly sessions blended sports drills with "wellness huddles" for focused dialogue on topics like resilience.

Key challenges, such as parental resistance and low urban attendance, were overcome by reframing the program as holistic development and increasing youth ownership through co-leadership and fun challenges. These crucial adaptations were vital for the program's acceptance and success, proving the model's flexibility and responsiveness.



Methodology

A pre-post, mixed-methods case study design was used to evaluate the initiative's feasibility, acceptability, and preliminary outcomes. Purposive sampling recruited 250 voluntarily-participating adolescents with a focus on commitment and gender balance, and 25 facilitators selected for their experience working with youth.

Data collection included pre/post-surveys, focus group discussions (FGDs), key informant interviews (KIIs), and direct observations.

Quantitative data from 220 complete survey sets were analyzed using paired t-tests, while qualitative data underwent thematic analysis.

Ethical protocols were strictly followed, including obtaining informed consent and assent, de-identifying all data for confidentiality, and implementing a "Recognize, Respond, Refer" protocol to ensure participant safety and support.

Findings and Key Themes

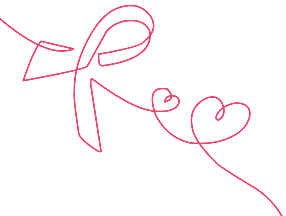
The *Mind Ball* pilot yielded significant positive results across both quantitative and qualitative measures.

Quantitative Outcomes

- **Enhanced NCD Knowledge:** Pre- and post-intervention surveys showed a statistically significant increase (average 35%, $p<0.01$) in participants' correct identification of NCD risk factors.
- **Improved Help-Seeking Attitudes:** On end-line feedback forms, 70% of participants reported feeling more comfortable talking about their feelings with a peer or trusted adult compared to baseline.
- **Increased Facilitator Confidence:** Post-training assessments indicated that 85% of trained facilitators reported feeling "confident" or "very confident" in delivering the integrated sessions.

Key Themes from Qualitative Data

Qualitative analysis revealed three powerful themes. First, adolescents reported greater **empowerment** and **agency**, feeling better equipped to manage their emotions and replace conflict with dialogue. Second, there was **strengthened peer**



support, with facilitators noting a significant shift to pro-social behaviors where encouragement replaced ridicule during games. Finally, the theme of **translating knowledge into action** was evident as the health conversations extended beyond the playing field, with youth applying lessons on topics like nutrition within their daily community life. These findings demonstrate the program's deep, practical impact on participants' skills, relationships, and real-world choices.

Discussion

The *Mind Ball* pilot proves that sport can serve as a powerful bridge for integrated health promotion among Kenyan adolescents, demonstrating the feasibility of a dual-focus curriculum addressing both mental health and NCD prevention. The intervention's strengths are its community-based, co-designed, and low-cost framework. While limited by the lack of a control group and reliance on self-reported data, the findings yield key recommendations. For practice, activities should explicitly link sports and play with health messages. For policy, ministries should invest in training teachers and community coaches to ensure sustainable, widespread impact by empowering these crucial frontline workers.

Reflections / Positionality

As practitioner-researchers from the implementing organization, our insider status granted essential community access but also introduced potential bias. We mitigated this by using a mixed-methods design and deliberately sought critical feedback from parents and community leaders. Challenges like parental resistance became crucial learning moments, forcing more authentic community dialogue and strengthening the intervention. This experience highlighted the power dynamics between NGOs and communities, reinforcing our commitment to a truly participatory approach where local voices guide program adaptation and ensure relevance.

Conclusion

The *Mind Ball* initiative demonstrates that a thoughtfully designed, sports-based approach can effectively bridge the divide between mental health promotion and NCD prevention for adolescents in diverse Kenyan settings. The positive engagement from youth, coupled with reported improvements in wellbeing and health knowledge, underscores the immense potential of this model. The core principles of play, participation, and integrated local facilitation offer a replicable and scalable pathway toward fostering healthier, more resilient young generations. The next steps involve refining the model based on these pilot learnings and seeking partnerships for wider dissemination and more rigorous impact assessment.

About the Authors

Collince Alan Dundo is a youth development advocate, digital wellness strategist, and IT consultant. He is the Founder and Executive Director of the Youth Initiative Development Programme (YIDP), where he leads programs on mental health, drug and substance abuse prevention, and digital well-being. He has curated the Pan-Africa Youth Health Summit, the Mental Health Walk, and the Digital Wellness Symposium. Collince also designs youth-centered sports tournaments integrating physical and mental wellness with NCD awareness. As an IT expert, he provides consultancy in network systems, website and graphic design, and digital marketing tools for nonprofit and community-based organizations.

Winnie Ashioya is a highly skilled and compassionate Registered Nurse with extensive experience in cancer screening, HIV/AIDS care, TB management, and Prevention of Mother-to-Child Transmission (PMTCT). She is passionate about adolescent health and community-based disease prevention, with a strong focus on mental health and noncommunicable diseases (NCDs). Winnie works closely with schools and local communities to empower young people through health education and preventive care. Her work integrates clinical excellence with community engagement, aiming to improve health outcomes and promote early detection, treatment adherence, and holistic patient support across underserved populations.

Joice Odhiambo is a qualified Educational Psychologist and experienced teacher with a strong commitment to nurturing mentally and physically healthy learners. With a background in both classroom instruction and psychological support, she integrates mental wellness strategies into education to foster resilience, self-awareness, and academic success among young people. Joice is passionate about early intervention, learner-centered support systems, and creating safe, inclusive learning environments. Her mission is to empower children and adolescents to thrive both in and beyond the classroom by addressing their emotional, cognitive, and behavioral needs through evidence-based educational psychology practices.

YIDP

Celeste: A Virtual Garden for Mental Health Support in Children with NCDs

Author: Joyce Liu

Figure 1: The virtual garden designed to support emotional healing.

Introduction

The link between physical and mental well-being is increasingly recognized, especially for people with noncommunicable diseases (NCDs) like diabetes, cancer, or asthma (Liu *et al.* 2021; Cini *et al*., 2024). These conditions can cause stress, anxiety, and depression, complicating treatment and daily life (Liu *et al*., 2021; Abbas *et al*., 2025).

Virtual reality (VR) is an emerging tool in mental health care, used in exposure therapy and immersive calming environments to improve various conditions. VR has enabled individuals to rehearse social situations and experience therapeutic settings (Villines, 2023). Tools like Oxford VR's *gameChange* for psychosis and Limbix's *Spark* for adolescent depression reflect the growing application of VR in mental health (GameChange — Department of Experimental Psychology, 2022; Miller *et al*., 2023).

Building on these therapeutic applications, *Celeste* is a VR-based intervention currently in development. It applies Solution-Focused Brief Therapy (SFBT) in an interactive, nature-inspired setting to support adolescents aged 10-19 with NCDs worldwide, particularly in low-resource settings where access to mental health services is limited. The intervention aims to help them reflect, heal, build health-positive behaviors, and strengthen overall emotional resilience. This article outlines *Celeste's* design process, features, and evaluation plans.

The Emotional Burden of NCDs

Children living with NCDs face emotional challenges that extend beyond their diagnoses. Many experience worry and isolation, increasing their risk for mental health disorders (Liu *et al.*, 2021; Abbas *et al.*, 2025). These emotional struggles directly impact physical health, with studies indicating that 30 to 70% of children with chronic illnesses experience difficulties following treatment plans (Gardiner & Dvorkin, 2006).

Families are also affected. Caregivers often experience stress, burnout, and financial hardship, which can strain their ability to offer support (Gardiner & Dvorkin, 2006). These combined pressures call for accessible and integrated care models that support both physical and mental well-being.

Existing Evidence for *Celeste*

Solution-Focused Brief Therapy and NCD Patients' Wellbeing

Solution-Focused Brief Therapy is one of the most widely used therapies worldwide. Rather than focusing on analyzing problems, SFBT focuses on developing solutions. One of its main methods involves questioning patients to help them develop hope and concrete plans for the future (Psychology Today, 2022).

SFBT has been consistently shown to improve mental health outcomes in youth, particularly for depression and anxiety (Gupta & Rai, 2019; Zhang, 2021). Specifically, numerous case studies have discovered the efficacy of SFBT in supporting youth with NCDs, enhancing motivation for disease management, strengthening coping skills, increasing hopefulness, and improving overall psychological well-being (Zhang, 2021, Christie, 2021; Maleki *et al*., 2024; Abdollahi, 2020).

Nature-Based Settings and Overall Wellbeing

Gardening and exposure to natural landscapes have been shown to reduce stress, improve mood, and foster calm (Panțiru *et al.*, 2024; Lee, 2017). *Celeste* takes these benefits and places them in a virtual world accessible to all, including those who are confined indoors due to health conditions.

Celeste: The Design

Figure 2: The garden supports self-reflection, storytelling, and goal-setting.

Studio Bahia is a non-profit that designs therapeutic VR to people in need of support around the world. They are currently developing *Celeste*, an SFBT therapeutic experience in a garden setting.

The design process began with research into Solution-Focused Brief Therapy (SFBT), exploring which elements could be adapted to a virtual format and how they might best support young users. Concurrently, the relaxation potential of different garden landscapes and the symbolic meaning of plants across cultures were explored to create a healing, meaningful garden environment to a global audience. A basic demo world was then created, and since then the garden has been iteratively refined in collaboration with mental health experts and VR professionals to align with therapeutic goals.

Currently, the virtual garden consists of four main areas:

- **Bamboo Grove:** Upon entry, users pass through a grove of bamboo, accompanied by the question: *"How have you managed to keep going despite the challenges?"* Bamboo, a cross-cultural symbol of resilience, invites reflection on personal strength.

- **Main Garden:** Inspired by Native American self-sustaining forest gardens, this area opens with the question: “*Is there an activity you love so much you lose track of time when doing it?*” This prompt reconnects users with joy and passion.

- **Planting Area:** Users plant and care for symbolic crops: the “Three Sisters” (corn, beans, squash) represent supportive ecosystems; wild strawberries symbolize self-care; and sunflowers prompt reflection on happiness. Small signs near plants prompt users to consider their meanings and how it relates to their own life.

- **Lotus Garden**: Floating on a lily pad is the classic SFBT “miracle question”: “*Suppose a miracle happens overnight, and when you wake up, you feel much better. What would be the first thing you notice?*” As users explore, lotus flowers bloom, representing growth and insight.

Through these cultural metaphors and interactive elements, *Celeste* supports self-reflection, storytelling, and goal-setting in a calm, engaging environment accessible to a global youth audience, especially those in need of mental healthcare.

Access and Equity

Figure 3: With Studio Bahia’s easy-to-use Lili VR headsets, users can insert a smartphone with the Lili VR app open to enter the immersive experience.

Device Accessibility

Celeste is designed for flexibility and can be accessed through VR headsets, Studio Bahia's Lili VR headsets, or the Lili VR smartphone app. Therefore, it works even without a VR device.

Ethical Use for Children

To protect young users, no data is collected, and the sessions are brief and guided to manage screen time. Therapeutic guidance is recommended to support reflection.

Next Steps

Piloting, Evaluating, and Scaling *Celeste*

Currently, an introductory prototype of *Celeste* is being piloted with 7500 adults experiencing depression in partnership with Stanford University and Northwestern University. This trial will gather quantitative and qualitative data from this population. The evaluation team is using engagement tracking, emotional self-report scores, and follow-up interviews to assess early outcomes. Preliminary results are expected by the first Quarter of 2026, with full analysis available mid-year. With these data, Studio Bahia aims to refine the user experience, aiming to ultimately support adolescents psychosocially.

Studio Bahia will continue expanding pilot testing in diverse contexts by partnering with healthcare providers, educators, and researchers. Future evaluations will likely include validated tools such as the Revised Children's Anxiety and Depression Scale (RCADS), Strengths and Difficulties Questionnaire (SDQ), and Pediatric Quality of Life Inventory (PedsQL), with assessments at baseline, post-session, and 30-day follow-up.

To support global scaling, Studio Bahia uses a collaborative implementation model—training local facilitators, incorporating community feedback, and co-developing strategies with partners. *Celeste*'s adaptability (e.g., language localization, cultural metaphors), offline capability, and existing distribution model make it a strong candidate for integration into global psychosocial care systems.

Conclusion

Children managing NCDs need more than just medication; they need emotional support, tools for self-understanding, and a sense of hope. *Celeste* offers one possible model: a virtual space where therapy and technology intersect to support mental wellbeing.

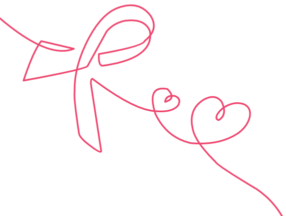
Celeste is part of a broader shift toward digital health tools, including telemedicine, wearables, mHealth apps, and AI, which further highlights the potential for integrated, holistic care (Talasila & Rai, 2025). These innovations can expand access, reduce stigma, and meet users where they are, especially in underserved settings.

Moving forward, success will depend on thoughtful design, cultural sensitivity, and cross-sector collaboration. *Celeste* is still evolving, but it reflects a vision of care that is creative, compassionate, and rooted in the belief that healing includes the mind as much as the body.

About the Author

Joyce Liu is a student intern at Studio Bahia and the lead designer of Celeste, a therapeutic virtual reality experience to support youth wellbeing. A passionate advocate for youth mental health, she has conducted research on VR's impact on emotional well-being, and presented her findings at the UNICEF & Karolinska Institutet Bold Ideas for Brighter Futures Conference. She is committed to designing innovative tools that help young people feel seen, supported, and strong.

STUDIO BAHIA
IMMERSIVE LAB



Bridging the Gaps: Integrated Approaches to Youth Mental Health and Chronic Conditions in Australia and India

Authors: Nataya Branjerdporn, Uttam Kumar, David Baker, Nicholas Fava

Introduction

The recognition of mental health as a noncommunicable disease (NCD) is a leap forward for international health priorities and the health of future generations. Half of lifetime experiences of mental ill-health begin by age 18 and three-quarters by age 25 (Solmi *et al.,* 2021). The critical importance of recognizing and supporting the mental health and wellbeing of young people was the focus of a recent Lancet Psychiatry Commission (McGorry *et al*., 2024), which provides an evidence-informed model of care for developing and implementing programs to support young people and broader NCD goals. Achieving meaningful progress, however, requires increased public awareness, reduced stigma against mental health, and engagement with policymakers.

Chronic physical conditions can negatively impact young people's functioning and quality of life. Young people with chronic conditions experience higher levels of depressive symptoms and suicidal thoughts compared to their peers (Pinquart & Shen, 2011; Virk *et al*., 2020). Currently, there is limited understanding of how services are supporting young people aged 12–25 who experience co-occurring poor mental health and chronic physical conditions or disability (Orygen, 2024).

The key issues and barriers for young people living with comorbid mental health and NCDs vary widely across contexts, making youth engagement critical to driving impactful and sustainable change. In Australia and India, the work of Orygen and Sense International India, respectively, has investigated the link between mental and co-occurring NCDs. Sense International India is a community-based organization reducing social isolation and promoting social inclusion for people with deafblindness, while Orygen is the world's leading research and knowledge translation organization focusing on mental ill-health in young people. This article explores these two distinct, real-world models—a policy-driven approach in Australia and a community-led initiative in India—to identify transferable lessons for integrating care for young people with comorbid conditions.

The Australian Case (Orygen)

In Australia, more than one in ten young people (11.2%) aged 15–25 experienced both mental ill-health and either a chronic physical condition or chronic pain (Orygen, 2024). Young people with co-occurring conditions often report diagnostic overshadowing, where physical symptoms are attributed to their mental health rather than underlying physical illness. One young person recounted, “I spent 10 years being told all my symptoms were anxiety and in my head....” Diagnostic overshadowing can result in delayed diagnosis and ineffective treatment.

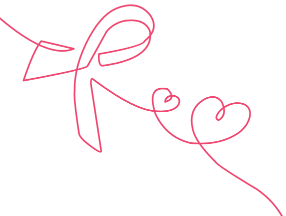
Additionally, these young people also described the high costs of appointments, medical specialist care, and medications for managing multiple conditions. Health professionals identified several key gaps, including assessments that fail to address both physical and mental health conditions; limited workforce knowledge on managing co-occurring conditions; collaborating with colleagues to provide complete care; and insufficient funding for integrated care (Perry *et al*., 2024). One young person noted, “the way that I needed care in terms of my mental health was very different from someone who doesn't have chronic conditions.”

The Indian Case (Sense International India)

In India, an estimated 500,000 people live with deafblindness, a disability that combines varying degrees of hearing and visual impairment (Shetye, 2019). People with deafblindness experience neglect, discrimination, and extreme isolation due to limited modes of meaningful communication and limited ability to participate in social activities independently.

Sense India employs an integrated model that includes personalized education plans, mental health support, adapted curricula, assistive technology, and employment pathways through skill-building and micro-enterprise development. They also engage with families and caregivers of people with deafblindness, building capacity to ensure quality and sustainable intervention. Over 25 years, the program expanded to serve over 80,000 individuals, with 63,500 in mainstream schools and 16,000 receiving specialist services.

To identify the mental health issues experienced by persons with deafblindness, Sense International India developed a screening checklist called SII-SAMWED (*Screening and Assessment of Mental Wellbeing of Deafblind*), structured around 1) Behavioural, 2) Emotional, 3) Social, 4) Cognitive and Physiological, and 5) Substance Abuse dimensions. Each dimension was carefully tailored to encompass a broad



spectrum of issues experienced by persons with deafblindness. The scoring tool incorporates elements from validated measures such as the Self Reporting Questionnaire 20 and the WHO-5 Wellbeing Index, tailored to address mental health concerns specific to children and youth with deafblindness. From a diverse sample of 984 children and youth aged 10-24 years old with deafblindness, 33% exhibited mild levels of mental health issues, 58% moderate issues, and around 8% severe issues.

Orygen (Australia) and Sense International (India) present multiple approaches responding to the experiences and key issues of each group.

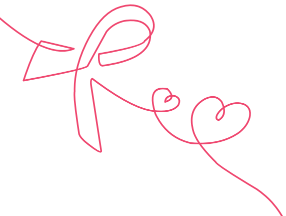
Embed mental health screening and wellbeing support in routine NCD care

Administration of SII's screening tool, in partnership with national organizations, has positively influenced communities and reduced the stigma around seeking mental health support. Training the workforce to recognize signs of mental distress, provide stress management strategies, and build emotional intelligence has enabled these components to become integrated into routine care (Sense International India, 2025). SII has found that following screening and integration of wellbeing support, requests for psychiatric consultations and counselling have increased.

Advocacy to decision-makers through a coalition of cross-sectoral and lived experience support

Following evidence-informed policy, Orygen convened a Policy Lab workshop with a range of stakeholders to improve primary mental health care delivery for young people with chronic physical conditions. The Policy Lab brought together eighteen stakeholders (from Melbourne, Australia), including three young people with lived experience, academics, mental health clinicians, general practitioners, representatives from not-for-profit organizations, government agencies, and health departments to co-design actionable solutions. These solutions included developing youth peer support roles for chronic conditions, establishing salaried case coordination positions in youth mental health services to support integrated care, and creating cross-disciplinary credentials for health professionals focusing on comorbid conditions.

These recommendations have informed policy advice to the Australian Government. Presenting these ideas to department representatives is the next step in advocating for the three policies. This advocacy will highlight that the recommendations have broad (but indicative) stakeholder support and build on existing evidence to improve workforce practices and service models to improve care for young people.



Peer networks that provide support and support rights-based advocacy

SII has facilitated the setting up of three national level networks supporting persons with deafblindness. Prayaas (endeavour in English) was the first network for families of persons with deafblindness and multiple disabilities, launched in 2003. Initially created to connect families of children with deafblindness, it now has over 3000 families who share experiences, support wellbeing, and advocate for rights. This peer community supports the wellbeing of families and advocates for the rights of persons with deafblindness and multiple disabilities (Sense International India, 2025).

Two other networks support people with deafblindness. They are Udaan (Leap or Flight in English; national network of adults with deafblindness), and Abhi-Prerna (Motivation or Inducement in English; national network of teachers working with persons with deafblindness) (Sense International India, 2025).

Supporting inclusion with learning environments and livelihoods

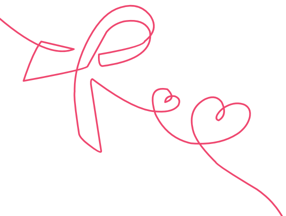
SII works with young people and families to develop education plans based on a child’s individual needs, partnering with schools and teachers to adapt curricula for students with deafblindness and create an inclusive learning environment. Of the 80,000 children and adults with deafblindness receiving support, 63,500 are in mainstream schools and around 16,000 receive specialist services through partner NGOs (Sense International India, 2025).

To support employment opportunities for young people, SII works with consumers to develop a business concept together with their family members and provides relevant training and seed funds to get their business off the ground.

Conclusion

This paper presents two approaches: a top-down, policy-focused model (Australia) and a long-term, bottom-up, community-embedded model (India). Although the approaches differ, they address common systemic barriers. In India, multiple approaches are enabling participation and addressing systemic barriers at the community level, whereas in Australia, the described approach seeks to advocate for change at a national level. In both cases, a lack of long-term funding, limited political commitment, and limited workforce capacity gap remain barriers to implementation.

Despite these barriers, both case studies highlight how support for young people with mental ill-health and chronic conditions or disabilities is being pursued. There are similarities in this pursuit within the different sociopolitical contexts, including



promotion of integrated care, advocacy through broad multidisciplinary support to change formal systems of care, education, employment, and the value of peer support and lived experience in developing relevant solutions, providing formal support, and improving wellbeing.

About the Authors

Nataya Branjerdporn is the manager of programs and partnerships at Orygen Global, Australia youth mental health Centre of Excellence and has over 8 years of experience in global youth mental health. She is currently leading the development and delivery of a global learning platform and was a co-chair of the Child and Youth Working Group, Global Mental Health Action Network.

Uttam Kumar is the CEO of Sense International India, a leading organisation in South Asia dedicated to supporting individuals with deafblindness and their families. With over 21 years of experience in the field, Uttam has extensive expertise in capacity building, programme development, strategic planning, and organisational development. Under his leadership, Sense International India is also actively supporting the development and implementation of educational rehabilitation, inclusion, and independent living projects for persons with deafblindness in Nepal and Bangladesh.

David Baker is the Senior Manager & Policy and Research Fellow at Orygen, University of Melbourne. has more than 17 years' experience in policy analysis and development, with impact in youth mental health, youth justice and social policy. David also works with researchers to develop their translational capacity to engage with policy audiences to support their contribution to evidence-informed policy.

Nicholas Fava, based in Thornbury, VIC, AU, is currently a Policy and Advocacy Senior Adviser at Beyond Blue. Nicholas Fava brings experience from previous roles at Orygen. He holds a 2015 - 2019 Master of Public Health (MPH) in Health Social Sciences @ University of Melbourne. With a robust skill set that includes Psychology, Mental Health, Research, Social Media, Community Engagement and more.

Mental Health and NCDs in Humanitarian Contexts

Authors: Andrew Clarke, Sarah Williams, Ruma Khondaker, Jahanara Miah, Prof. Nusrat Husain

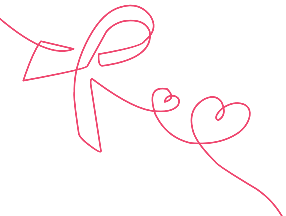
Mental and physical health are closely linked. Poor mental health can increase the risk of chronic illness, while living with a long-term condition can worsen mental health. This relationship is especially damaging in humanitarian contexts, where refugees face trauma, food insecurity, and disrupted health services. Care for conditions such as hypertension, diabetes, and asthma is often deprioritized, and systemic barriers, including fragmented health systems, supply chain breakdowns, and workforce shortages, limit access to both NCD and mental health care (Ibrahim and Damasceno, 2012; WHO, 2023).

The Global Picture

Mental health conditions such as depression and anxiety are common globally, but may be amplified by uncertainties, shocks, and abrupt life-changes associated with conflict and climate-related events. Studies in East African refugee populations found rates of depression ranging from 29% to 81% (Shibeshi *et al*., 2024), while a recent study of Palestinian refugees in Jordan found 73% with moderately severe and severe depression (Gammoh *et al*., 2024). Humanitarian crises exacerbate challenges further by disrupting access to medications, care continuity, and social support.

The relationship between NCDs and mental health is bi-directional. People with diabetes are more likely to experience depression, which in turn impairs glycemic control and adherence to treatment (Farooqi *et al*., 2022). Long-term physical illnesses may also cause distressing symptoms leading to pain, disability, social isolation, restrictions on daily functioning, and reductions in incomes due to lost earnings and healthcare expenses— factors strongly associated with depression and anxiety (WHO, 2022).

Poor mental health can increase the risk of developing long-term physical conditions, due to associated risk behaviours such as smoking, poor diet, alcohol use, and physical inactivity (O’Neil *et al*., 2015). Mental ill-health can also reduce motivation and capacity for self-care, undermining adherence to treatment plans (Riegel *et al*., 2021). The World Health Organization describes this as a "vicious cycle" between mental and physical ill-health.



Life in Crisis Zones

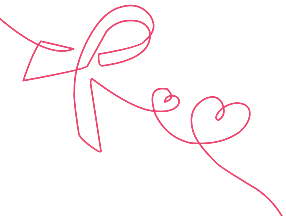
In humanitarian contexts, the links between mental health and NCDs are compounded. Refugee populations may experience trauma, violence, food insecurity, and displacement—factors that increase risks for both mental health problems and chronic disease (Bangpan *et al*., 2019). In parallel, essential services for conditions like hypertension, asthma, and diabetes are often deprioritized. At the same time, several systemic, funding, and operational barriers make it harder to address these needs. Funding priorities often focus on acute, visible crises such as infectious disease outbreaks or malnutrition, leaving long-term conditions like hypertension, asthma, and diabetes under-resourced. Fragmented health systems make it difficult for people with NCDs to receive regular follow up or medication, and screening is rarely undertaken so those with undiagnosed NCDs remain unaware of their condition.

In addition, supply chain disruptions and workforce shortages mean there may be few, if any, trained mental health or NCD specialists, and overstretched general health workers may lack the time or skills to integrate both areas of care. This paradox renders people in humanitarian contexts simultaneously more vulnerable to NCDs and less able to maintain productive and good quality lives in the presence of NCDs.

Effects on Children

Although most NCDs affect adults, risk often begins early in life. When mothers experience depression, anxiety, or other mental health challenges, this can affect prenatal care, nutrition during pregnancy, and early caregiving practices (including infant feeding), all of which are important for a child's physical and emotional development. Chronic stress exposure in these settings disrupts hormonal regulation and immune system development in children, predisposing them to obesity, metabolic disorders, and cardiovascular disease late in life (Marmot and Bell, 2019). In families affected by unmanaged NCDs, children may experience reduced household economic and food insecurity, unintended emotional neglect, and impaired development due to caregivers' mental health difficulties.

Studies in refugee settlements in Uganda, Kenya, and Ethiopia, found that over 30% of adult patients with chronic conditions had symptoms of clinical depression or anxiety, but few received psychosocial support (Pozuelo *et al*., 2023). In Kenya, health workers reported that mental distress among patients with diabetes and hypertension was common but unaddressed in routine care (Shirey *et al*., 2015).



These findings reinforce the importance of health services that integrate mental health and NCD care.

Our Work in Bangladesh

In the Rohingya refugee camps of Cox's Bazar, we tested a group-based intervention of 10 sessions delivered over 12 weeks with 491 post-natal mothers of similar age and circumstances, who had children under one year of age. Six camps were included in the study; mothers in three camps received the intervention, while mothers in the other camps received usual camp-level services (and were offered the intervention after the study). The intervention was offered to all postnatal mothers living in the designated areas, and, to reduce potential stigma associated with mental health problems, mothers were not screened for depression before joining the study.

The approach combined the parenting program *Learning Through Play (*LTP*)* with WHO's *Thinking Healthy Program (*THP*)*. It aimed to help mothers construct different ways of thinking about the difficulties they face, support positive actions, and retain a sense of control. Community Health Workers, trained in facilitating the intervention but not specialized in mental health or child development, delivered the intervention.

Preliminary, unpublished data collected with the *Patient Health Questionnaire* (PHQ9) three months after the intervention found high rates of depression among mothers who did not receive the intervention: 68% showed measurable signs of moderate or more severe depression, including 24% with moderate-severe or severe symptoms. However, among mothers who participated in the group-based intervention, 26% had PHQ9 scores suggestive of moderate or more severe depression, including 3% with moderate-severe symptoms. The levels of depression found in the intervention group would be regarded as substantial in many settings; however, compared to mothers who did not receive the intervention, the findings suggest it provided important protection. Mothers in the intervention groups also reported fewer difficulties in performing usual activities, and less daily pain or physical discomfort:

"When I was feeling really overwhelmed, it was hard to focus on the things I needed to do for my children. My mind was constantly racing, thinking about all the problems we had. I couldn't focus on anything for long. The sessions taught me how to manage my thoughts better, and that has made a difference in how I handle everything day-to-day."

> *"Before attending the sessions, I often worried and thought 'it would be better if I were gone.' Now I've learnt what's good and bad for children and to replace negative thoughts with positive ones to manage stress. My relationship with my mother-in-law has also improved."*
>
> *Participant mothers*

This work in Cox's Bazar demonstrates that in crisis settings, parents commonly struggle with mental health and that feasible, group-based interventions can provide meaningful protection without specialist mental health professionals. For their children, addressing mother's mental health can be a protective investment against future health risks from NCDs.

Work in Other Settings

The findings align with studies from other LMICs such as Pakistan and Nigeria, including women and men (Husain *et al*., 2025; Jidong *et al*., 2025). In Pakistan, similar Thinking Healthy Program interventions (including LTP plus THP) have been successfully scaled through the Lady Health Worker cadres, leading to lasting reductions in depression and better outcomes for both mothers and babies (Atif *et al*., 2019; Husain *et al*., 2021). In Nepal, mental health interventions also task-shifted to non-specialised cadres improved psychological well-being in postpartum women with long-term benefits (Singla *et al*., 2017). These approaches are low-cost, culturally adaptable, and suitable for humanitarian contexts.

Individual low intensity mental health interventions in primary health care can also improve NCD outcomes. In Kenya and other settings, primary care nurses have been trained to deliver brief psychological support to patients with diabetes and hypertension, to improve adherence to medication and better blood pressure control.

The bi-directional relationship between NCDs and mental health is evident and particularly strong in low-income and humanitarian settings where people face multiple stressors. These examples show that mental health can be integrated into primary health care and NCD programs via groups or within individual consultations, even in resource-constrained environments.

Conclusion

Our experiences from Cox's Bazar, together with evidence from other LMICs, suggest that simple, community-based mental health support can help break the harmful cycle between mental illness and chronic disease.

Investing in non-specialist worker training to deliver basic approaches to protect and support mental health (often referred to as task-sharing) provides viable options in LMIC and humanitarian settings. This is particularly the case with primary health care workers and community health volunteers, as evidenced by the effective use of the group-based interventions discussed in this paper and WHO's mhGAP interventions in multiple countries (Fekadu *et al.*, 2016; WHO 2021).

Embedding practical and deliverable approaches to mental health support within NCD strategies, using models like task-sharing, group interventions, and primary care integration, offers a feasible path forward. Ignoring mental health in NCD care results in poorer outcomes, so it makes clinical and economic sense to address both together.

Addressing the mental health of parents, caregivers, and children affected by NCDs will not only improve current health outcomes, but will also protect children and young people from inheriting the same cycle of chronic illness and disadvantage.

About the Authors

Andrew Clarke is a Senior Health Advisor for Save the Children UK, working in paediatrics and public health for over 30 years. He supports clinical and public health programs for children and families in countries including Yemen, Bangladesh, Nepal, Ethiopia and Malawi, and a research portfolio trialling new approaches to long term challenges in maternal and child health. He is an Honorary Clinical Researcher at Lancaster University and has interests in human rights, mental health, climate change and health equity. Andrew also undertakes technical advisory roles for NGOs and organisations including the Council of Europe and the World Health Organisation.

Sarah Williams is a global health professional with over 25 years of experience, primarily focused on maternal and newborn health. With a background in midwifery, she has worked across the UK, Africa, and Asia in roles including teaching, training, mentoring, operational research, and programme leadership. She currently serves as the Senior Maternal and Newborn Health Advisor at Save the Children UK, providing technical support to programmes in low- and middle-income countries both remotely and on the ground. Her career is underpinned by a strong focus on health equity and the right of all people to quality care.

Ruma Khondaker is a senior clinical psychologist in Bangladesh with over 20 years of experience in child and adult mental health, MHPSS for displaced populations and refugees, trauma, addiction, and violence-related care. She has worked with SCI, HI, UNDP, and other national/international agencies in Bangladesh, Myanmar, Thailand, and Ukraine. She holds degrees from the University of Dhaka and a certification in Couple and Family Therapy from the University of Guelph. Ruma currently serves as MHPSS Advisor for Save the Children Bangladesh and is affiliated with CISMU-UNDSS, with a strong focus on community-based and emergency MHPSS programming.

Jahanara Miah is a research associate at the University of Manchester with expertise in mental health, cultural psychiatry, co-production, and inclusive research practices. She has worked on international projects such as SENSE-Cog and SAHAR-M, focusing on older adults with dementia and suicide prevention in South Asia. Jahanara currently supports culturally sensitive burns care research in Pakistan and leads patient and public involvement (PPIE) at Mersey Care NHS Trust. She also leads the qualitative component of a School of Primary Care Research (SPCR) funded project exploring mental health and service use among older adults in primary care.

Prof Nusrat Husain is Professor of Psychiatry and the Director Research Global Mental Health, at the Division of Psychology and Mental Health at the University of Manchester. He also serves as the Director of the Global Centre for Research on Mental Health Inequalities and an Honorary Consultant at Mersey care NHS Foundation Trust. Prof Husain has been widely recognised for his contributions to mental health research and cultural psychiatry. His research emphasises innovation and multilateral learning. This year he received the Presidential medal from the Royal College of Psychiatrists for promoting inclusion in clinical research.

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Integrating Worlds: Addressing Noncommunicable Diseases and Mental Health in Indigenous Contexts

Authors: Carolyn M. Melro, Star Sundown, Kara Prosper, Joy Charles, Christopher J. Mushquash, Srividya N. Iyer

Indigenous youth in Canada face significant and unique challenges related to noncommunicable diseases (NCDs) and mental health, with almost 50% having a diagnosed chronic health condition (Anderson, 2021). These challenges are influenced by historical and ongoing colonialism that disrupt(ed) cultural and traditional practices and led to intergenerational trauma among some Indigenous Peoples and communities, destabilizing the traditional balance of physical, emotional, spiritual, and mental wellbeing. Intergenerational trauma is passed from one generation to subsequent generations through biological, social, and psychological mechanisms (Phillips-Beck *et al*., 2019). NCDs and intergenerational trauma are thus deeply interconnected, particularly in Indigenous communities.

Indigenous perspectives prioritize wholism and harmony, as evident in the Medicine Wheel. While not a universal symbol for Indigenous Peoples, the Medicine Wheel illustrates the dynamic interconnectedness of four aspects of the human condition—physical, emotional, mental, and spiritual (Sevenson and Lafontaine, 2003). These represent avenues for developing and implementing services for and with Indigenous youth that consider the effects of intergenerational trauma.

Integrating Worlds: Bringing Together Clinical and Cultural Services

Integrated youth mental health services have emerged in response to increasing concerns about the mental health and wellbeing of young people and the fragmented nature of existing services (Halsall *et al*., 2019). Globally, integrated youth mental health services are organized around core principles: serving a wider age range (12-25/29 years), being based in primary care or community settings, co-designed spaces and services with youth, and integrating multiple supports and interventions through physical or virtual colocation. These supports include mental, physical, and sexual health services, peer support, housing, and employment (Halsall *et al*., 2019; McGorry *et al*., 2024).

There has been growing momentum around this model, with evidence pointing to its promising outcomes including improvements in reach, satisfaction, timeliness of services, and symptomatic and functional recovery (Iyer *et al*., 2025). Over the past decade, such services have been scaled across Canada, including in Indigenous communities and contexts that serve substantial numbers of Indigenous youth. This started with ACCESS Open Minds (ACCESS-OM), a research grant-funded initiative that brought youth, families, researchers, service providers, Indigenous leaders, and decision-makers to co-implement and evaluate transformed youth services in diverse urban, rural, remote and Indigenous settings across Canada (Malla *et al*., 2019).

Given this context, there has been an impetus to examine how such services can be culturally grounded to best serve the needs of Indigenous youth. An important reflection from this (re)examination is that such services must integrate the often absent or optional spiritual dimension to health and wellness. To thus align integrated care models with the Medicine Wheel, it is imperative to think beyond the box of clinical mainstream services and include cultural teachings, practices, and tools to enhance wellness. In ACCESS-OM, this first required a commitment to building and sustaining trust (see our conceptual framework for this, Melro *et al.*, 2025) and a shift in how non-Indigenous researchers and service providers understood and approached care in Indigenous contexts.

We provide a case study of a co-created community garden in one of the six ACCESS-OM Indigenous-partnered sites, Sturgeon Lake First Nation. The garden became a meaningful part of the service model, rooting wellness in connection to land, culture, and community. While this site offers a compelling case, it reflects a broader pattern across all six Indigenous-partnered ACCESS-OM sites, where traditional food practices, cultural teachings, and land-based experiences were embedded as core elements of care. Embedding such practices can not only address immediate health concerns but also support Indigenous youths' holistic wellness and strengthen community leadership in culturally anchored care. Authors on this piece include members of the ACCESS-OM network and Sturgeon Lake First Nation, who were part of the gardening initiative.

Culturally Grounded and Holistic: Case Study of a Community Garden

Through a co-designed language revitalization project with First Nations girls aged 10-15 in an after-school Girl Power program, the concept of *mamāhtāwicikew* ("empowerment" in Plains Cree) was explored (Gaspar, 2018). *Mamāhtāwicikew* refers to a spiritual journey through rites of passage ceremonies to discover one's gifts from the Creator. The girls identified hunger and poverty as barriers to achieving *mamāhtāwicikew* and suggested developing a community youth-led garden with Knowledge Keepers within the community (Gaspar, 2018; Gaspar *et al.*, 2019). Knowledge Keepers are respected individuals who carry, preserve, and share traditional knowledge, teachings, and cultural practices in Indigenous communities.

The school donated land (60 ft X 30 ft) next to the ACCESS-OM Youth Centre for the garden, with the aim of increasing food security among youth and families to eventually improve health and social outcomes. Through a student work placement grant, the ACCESS–OM team hired two girls from the community to help with the garden and promote it to youth in the community. Within two months from the identification of poverty and hunger as barriers to *mamāhtāwicikew*, a community garden was implemented to provide locally grown produce (e.g., potatoes, corn, lettuce, herbs, squash) to the Youth Centre. By fostering relationships, the garden also facilitated youths’ access to formal clinical services and social and cultural supports in the ACCESS-OM Youth Centre.

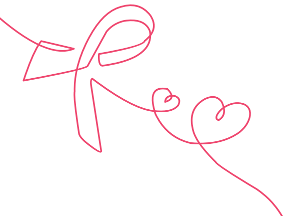
The garden became a gathering space for youth, Knowledge Keepers, and community members to heal and acknowledge historical and ongoing harm impacting Indigenous identity and spirit. The community garden continues to operate through funding from the community Health Centre and volunteers.

Studies have suggested that community gardens promote positive mental health, physical activity (Stroink *et al*., 2010; Moscou, 2024), and a sense of connection to nature (Companion, 2013; Moscou, 2024). In this First Nations community, the garden was seen as contributing to positive change by developing trusting relationships and weaving together spiritual growth and traditional language (Gaspar *et al*., 2019).

Gardening programs, such as ours, link nutrition and food to revitalizing language and cultural knowledge, building capacity and *mamāhtāwicikew*. Embedding gardening into integrated youth mental health care services can support Indigenous youths' wellness and cultural continuity by rejuvenating traditional food and medicine practices, fostering land-based healing and language connection, and beginning to address the enduring effects of colonialism and intergenerational trauma.

Moving Forward in Balance

A community gardening activity embodies the Medicine Wheel’s holistic approach, nurturing physical health through fresh food and activity; emotional well-being through connection; mental health through learning and nature’s calming effects; and spiritual balance through relationship with the land. More broadly, emphasizing holistic wellness through the Medicine Wheel’s four interconnected dimensions—physical (e.g., nutrition, movement), mental (e.g., learning, cognitive healing), emotional (e.g., attachment, regulation), and spiritual (e.g., ceremonies, connection to land)—can foster healing and address both NCDs and mental health.

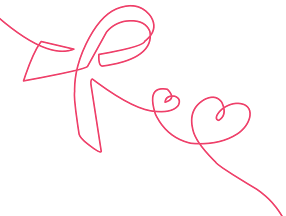


Recommendations for Policy and Decision-Makers

- Build meaningful partnerships with Indigenous leaders, communities, and youths grounded in trust, respect for self-determination, and an acknowledgment of historical harms from research/service initiatives.
- Center assessment, prevention, intervention, and research around NCDs and mental health in Indigenous contexts on perspectives about balance, interconnectedness, and holistic wellness.
- Co-design and implement land-based activities (e.g., gardening) and cultural teachings alongside evidence-based clinical interventions. Gather data on processes (e.g., trust) and community-prioritized outcomes (e.g,. cultural connectedness, wellness, community ties) that communities can use to improve and advocate for such practices, while respecting Indigenous data sovereignty.
- Root strategies, policies, and programs in Indigenous knowledge and practices, including the lived realties of Indigenous youth.
- Apply a relational and multi-generational approach to health promoting programs in Indigenous contexts by connecting youth with Elders and Knowledge Holders.

Acknowledgements

The authors of this piece would like to acknowledge the community members and leaders who made the ACCESS Youth Space Garden possible, the Girl Power participants.



About the Authors

Carolyn Melro, Ph.D., is a Scientist at the Children's Hospital of Eastern Ontario Research Institute and Assistant Professor at the University of Ottawa. Her research integrates health system design, equity, and youth development, emphasizing co-created, community-led solutions. Dedicated to Indigenous children and youth's health and social equity, Dr. Melro partners with communities and youth to inform transformative, culturally grounded initiatives. Her work is rooted in innovative methodologies and meaningful engagement, driving collaborative change across Canada's mental health systems. *Affiliations: Children's Hospital of Eastern Ontario Research Institute, Ottawa; ACCESS Open Minds Indigenous Youth Mental Health and Wellness Network.*

Christopher Mushquash, Ph.D., C.Psych., is a registered clinical psychologist, Professor in the Department of Psychology at Lakehead University, Vice President Research at the Thunder Bay Regional Health Sciences Centre, and Chief Scientist at the Thunder Bay Regional Health Research Institute. He's a Canada Research Chair in Indigenous Mental Health and Addiction and co-lead of the ACCESS Open Minds Indigenous Youth Mental Health and Wellness Network with expertise in rural and northern clinical practice and the development of culturally appropriate interventions. An Anishinawbe scholar, born and raised in rural Northwestern Ontario, and a member of Pays Plat First Nation.

Srividya N, Iyer, Ph.D., is Professor at McGill University and a Researcher at the Douglas Research Centre in Montreal, Canada and a psychologist. Her research seeks to design, implement, research, and build capacity and advocate for youth-attuned, effective and culturally and contextually relevant mental health and well-being-focused services, supports and policies in Canada and globally. Working closely with Dr. Chris Mushquash and many Indigenous young people, leaders and communities across Canada, Srividya co-leads a pan-Canadian Indigenous integrated youth services network. Srividya also significantly contributes to various mental health capacity building and research projects in globally, including India, Nigeria and Bangladesh.

Star Sundown, a Cree Women and a youth co-researcher in the Girl Power Program from Sturgeon Lake First Nation and has co-published and presented locally and internationally on this work.

Kara Prosper, a Cree Women and a youth co-researcher in the Girl Power Program from Sturgeon Lake First Nation and has co-published and presented at an international conference on this work.

Joy Charles, a Cree Women and member of Sturgeon Lake First Nation. She currently completed her Level 2 Early Childhood Educator certification and will be working towards her Level 3 this Fall. She was an adult mentor in the Girl Power Program.

From Stress to Systems: Embedding Mental Health Leadership in Schools to Prevent NCDs

Author: Priscilla Adjei-Mensah

The wellbeing of children is not an addition to the mission of education—it is the mission of education. More importantly, it is central to lifelong physical health. This article explores how embedding mental health leadership in schools, especially in under-resourced settings, can serve as a foundational strategy in the prevention of noncommunicable diseases (NCDs).

Schools: The Missing Link in NCD Prevention

Over the past two decades, progress in preventing NCDs globally has been mixed. While some regions have seen better mortality rates and risk-factor management, others, especially low- and middle-income countries, continue to face challenges (Lv & Zhang, 2024; Thakur *et al*., 2021). To reduce the long-term burden of NCDs globally, we must start upstream by embedding mental health leadership and trauma-informed systems within schools. These settings are not just sites of learning but also early intervention platforms where emotional regulation, stress responses, and health behaviours are shaped for life.

Mental Health Leadership in schools refers to the intentional placement of trained mental health professionals within the governance structures to lead on emotional wellbeing policy and practice, coordinate staff training, oversee evidence-based prevention strategies, engage families, and incorporate student voices into decision making. This involves a dedicated person or team working closely with students, parents, teachers, and external partners, influencing both daily practice and long-term school strategy.

Mental health and NCDs are deeply connected. Both share overlapping risk factors such as chronic stress, social exclusion, and poverty, and both benefit from early prevention. In contexts like Ghana and sub-Saharan Africa, where students face high academic pressure alongside limited mental health services, schools often become the most consistent and accessible setting for providing such targeted interventions.

Stress, Trauma, and the NCD Connection

In Ghana and across much of sub-Saharan Africa, conversations around mental health and NCDs have historically existed in silos. While NCD prevention is often focused on physical lifestyle factors such as nutrition, exercise, and medical screenings, mental health is treated separately, if at all. Yet McEwen (2003) and Hostinar *et al.* (2017) stress that early life influences like chronic stress, unresolved trauma, and poor emotion regulation are significant predictors of long-term physical health outcomes, including heart disease, depression, diabetes, and substance dependence.

The science is clear and well documented: prolonged stress disrupts hormone balance, raises blood pressure, weakens immunity, and increases inflammation—risk factors shared across many NCDs (Alfonso & Chander, 2024).

When school-age children are unsupported emotionally, unhealthy coping mechanisms such as smoking, over-eating, and withdrawal start to form, compounding risk over time. For example, a school culture that relies heavily on punitive discipline, as with most Ghanaian public schools, can reinforce stress and social exclusion, further establishing emotional distress and long-term health vulnerabilities. What is often missing from policy and practice is that schools are among the earliest and most universal arenas where these risks can be identified and addressed.

A Case Study: Al-Rayan International School, Ghana

At Al-Rayan International School in Accra, Ghana, we challenged the status quo by embedding wellbeing into the DNA of our school culture and leadership.

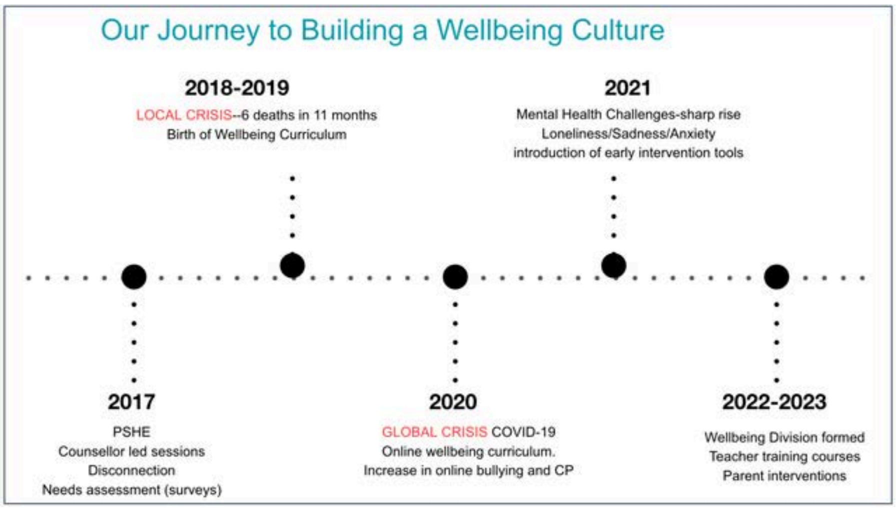


Figure 1: Snapshot of our journey to building a culture of wellbeing.

This work began in 2018, when the school community experienced an unprecedented number of losses, compounded soon after by the COVID-19 pandemic and its associated challenges. We recognized the growing mental health needs and the absence of a culturally responsive and systemic approach. Over the following years, by placing wellbeing as a strategic focus and asking the right questions, we developed a mentally-aware culture grounded in trauma-informed care, Social and Emotional Learning (SEL), Leadership, Voice, and Inclusion.

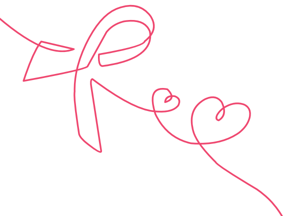
Our model of mental health leadership is both preventive and structural, combining direct student support, staff capacity-building, school-wide policy reform, and the integration of wellbeing into every layer of the school system such as admissions and disciplinary structures. In practice, the key pillars of our journey included the following:

1. Positioning mental health as a key focus in the school's strategic planning. This looked like having a mental health lead in the capacity of a psychologist at the senior management level to design and influence policies, systems, and professional development of teaching and non-teaching staff.
2. Building a team of specialized mental health professionals (school counsellors, art therapists, and wellbeing curriculum facilitators) to form the Wellbeing Department. This later morphed into the Wellbeing Division, focusing on providing emotional support services and designing and implementing a school-wide wellbeing curriculum focused on emotional regulation, empathy, identity, and global citizenship.
3. Using data from surveys, behavioral, counselling, and attendance records to inform strategy and adapt interventions.
4. Centering belonging and voice by supporting student-led councils and representatives, sharing decision-making to strengthen trust and agency.
5. Extensively collaborating with family and immediate community through mental health workshops, open fora, and coffee mornings for continuity of care.

The results from implementing these strategies have been phenomenal. Students have reported a stronger connection to school, greater help-seeking behavior, and improved academic engagement:

"I always kept my problems to myself. In school, we openly discuss mental health and that has encouraged me to speak up about my struggles. I feel lighter knowing I can talk to someone."

Year 12 student, Al-Rayan International School.



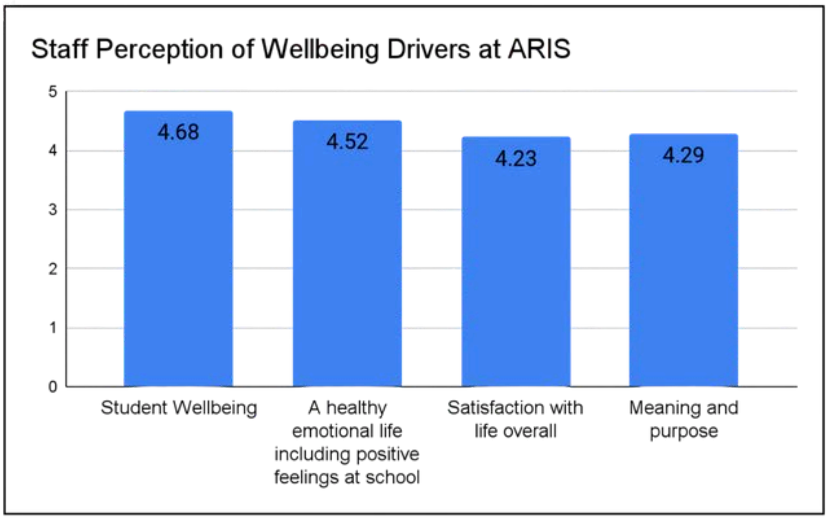


Figure 2: Student Subjective Wellbeing Questionnaire (SSWQ) was used to assess and evaluate student wellbeing and high levels of positive student wellbeing were observed.

Staff and parents also feel more empowered to respond to distress, and wellbeing is no longer a reactive service but an embedded, proactive system:

“Over the years, the way I approach teaching has certainly changed. I’m not just focused on academics, I know I’m helping my students build essential skills for life.”

Middle Years Programme (MYP) Coordinator, Al-Rayan International School

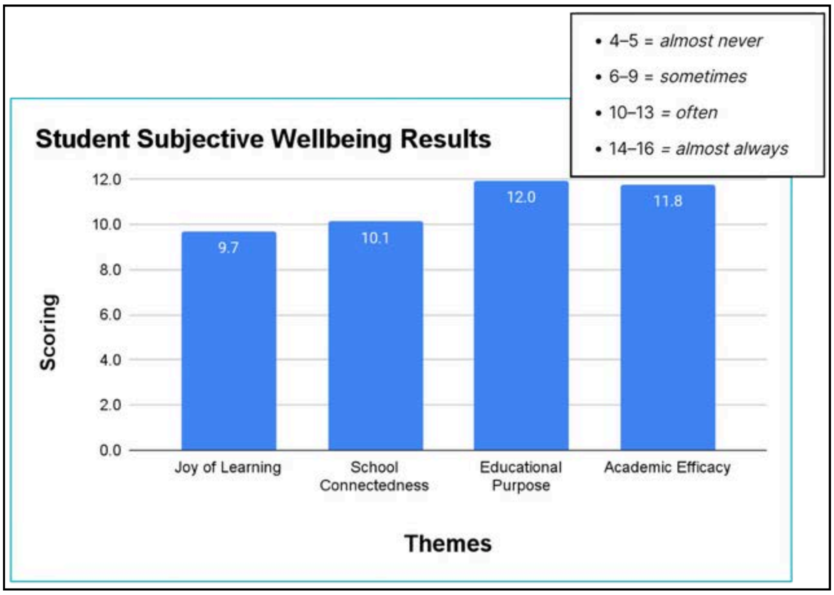


Figure 3: Staff perception of student wellbeing culture at ARIS was assessed using a 5-point Likert scale (0-None at all to 5-Very much). Study results indicated that staff have a very high perception of student wellbeing at ARIS.

In 2023, 68% of examination-year students received active support from the Wellbeing Division. Alongside robust academic support, this access to mental health support strategies contributed to an outstanding 100% pass rate for all students who sat for the International Baccalaureate (IB) exams. Our students achieved scores above the World Average in 5 out of 6 portfolio subjects, highlighting the strong link between wellbeing and academic success. These results demonstrate the positive impact of prioritizing student well-being on their academic and personal achievements.

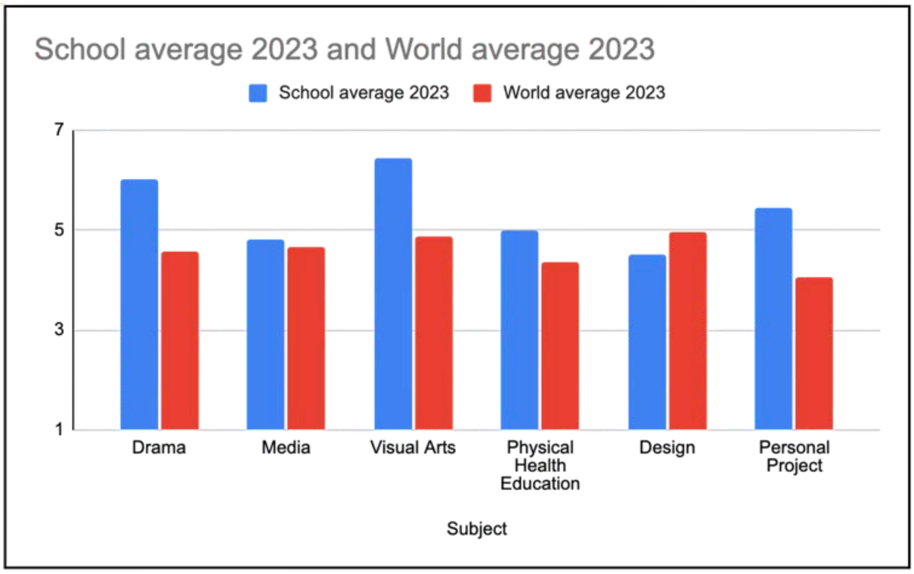


Figure 4: IB MYP results analysis of ARIS in comparison to the World Average as captured by the IB.

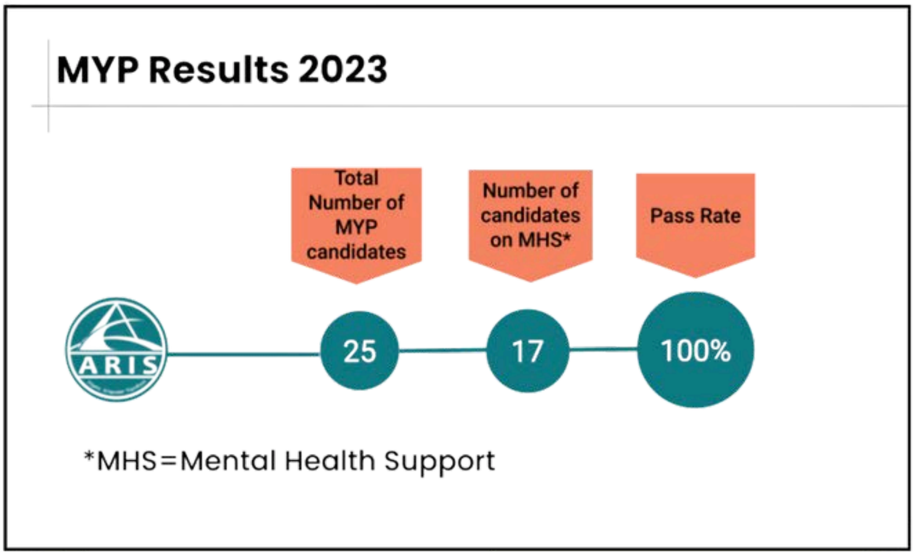


Figure 5: Access to mental health support strategies led to an outstanding 100% pass rate for all students who wrote the exams.

Call to Action: Embedding Mental Health in Education Systems

Schools are where children and young people spend most of their formative years. They are both key sites for risk as well as powerful platforms for prevention. Ensuring that schools embed Mental Health Leadership into their policies and practices can mitigate stress-related risk factors tied to physical health outcomes.

Governments, policymakers, global health funders, and teacher-training institutions must:

1. Mandate Mental Health Leads in all schools through the Ministries of Health and Education.
2. Integrate SEL and mental health literacy into national basic and secondary education curricula.
3. Fund school-based wellbeing initiatives as part of NCD prevention plans.
4. Equip teachers with trauma-informed and psychosocial support skills.

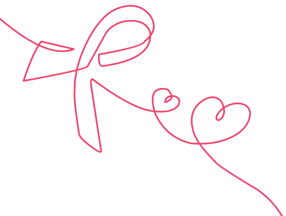
While our model was developed in an international school setting, its core principles are adaptable. Integrating SEL into school curriculum, training staff in trauma-informed practices, and creating safe spaces for student voice are relatively low-cost, high-impact starting points that can be implemented in most schools. Partnerships with NGOs, community health workers, and local leaders can extend reach without significant financial investment.

The consequences of inaction are severe. Without early intervention, school children will carry silent burdens into adulthood, risking anxiety, depression, self-harm, and unhealthy behaviors that fuel the NCD crisis. Alternatively, a school system that centers mental health leadership will build a future community of people with lifelong health literacy, trust in systems, and resilience. Let us start where prevention begins: in the classroom.

This feat cannot be left to schools alone. It is time for governments, funders, and education partners to recognize Mental Health Leadership as essential to both learning and health.

About the Author

Priscilla Adjei-Mensah is a psychologist, educator and wellbeing specialist based in Accra, Ghana. She serves as the Lead School Counsellor at Al-Rayan International School and sits on the advisory boards for both HundrED spotlight for Child-Centered Learning and the Association of International Schools in Africa (AISA)'s Wellbeing Design Team. With over six years of experience in education, mental health and student advocacy, Priscilla designs and implements trauma-informed, culturally grounded wellbeing frameworks for African international schools. Her work focuses on embedding leadership, equity and mental health as cornerstones of educational success.



Research

Socio-Ecological Thinking in Healthcare: Understanding Caregiver Burden and Mental Health in Parents of Children with Type 1 Diabetes Mellitus

Authors: Dr. Mohd Nazir Mohd Nazori, Dr. Nurulwahida Saad, Dr. Muhd Alwi Muhd Helmi, Dr. Muhamad Ariff Ibrahim

The Big Question

Type 1 Diabetes Mellitus (T1DM) is a chronic illness with early onset, often diagnosed in childhood. Management is complex, requiring regular blood glucose and insulin administration (Gazali, 2022). Children, especially those newly diagnosed, often rely on parents to manage their condition. This caregiving commitment becomes more demanding within the large family size and collective culture of Malaysia. Caring for a child with Type 1 Diabetes is emotionally demanding and mentally exhausting—but it doesn't have to be.

This study explored how caregiving impacts parents' emotional and psychological wellbeing using the lens of Social Ecology Theory, which considers how experiences are shaped not just by personal factors but by the interconnected web of family, community, and systemic interactions. We obtained ethical approval from the IIUM Research Ethics Committee and organised two focused-group discussions involving 14 mothers and four fathers using a semi-structured interview guide. The interviews were transcribed and underwent inductive thematic analysis, guided by previous research and relationship theories to better understand parents' lived experiences.

What We Discovered

Parents reported significant emotional stress and lifestyle disruption linked to caregiving responsibilities. The findings are summarised below.

1. Constant Worry and Hypervigilance

Parents experienced persistent anxiety about their child's blood sugar levels, especially during sleep. Many routinely checked on their child at night, fearing life-threatening complications like hypoglycemia or diabetic ketoacidosis. For some, this led to chronic insomnia and reliance on sleep medication. One mother said:

"I feel the urge to check her sugar always…(even) at night when she sleeps."

Although parents become more confident in managing symptoms over time, the worry never fully disappeared. When children grew older and became more independent, parental anxiety lessened but remained present.

"Now my daughter doesn't like me to help her or ask too much about it. But I can't help asking, just to make sure…"

2. Overwhelming Responsibilities and Guilt

Parents juggled caring for their T1DM child with other responsibilities, including work and caring for other children. Many reported feelings of guilt for not giving equal attention to their other children. Some tried to involve siblings in diabetes care to bridge this gap. A mother lamented:

"I do feel pity for my other kids. They need my attention…This is an important phase in their life."

Working parents often left their jobs temporarily during the day to administer insulin at school. Although they managed to cope, they acknowledged how this disrupted work and personal wellbeing.

"During school recess time, I would go to school to inject insulin…troublesome with traffic and parking…it's tiring to do it every day but that's what I should do."

Parents tended to compensate their absence with overtime work. However, they would feel guilty for always needing to leave the team.

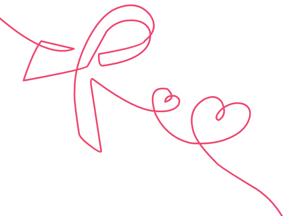
3. Strain in Relationships and Routines

Strict control over food intake created tension between parents and their children. Parents decided the type of food and intake schedule and imparted this discipline to their children. Children occasionally broke dietary rules, causing conflict. Nevertheless, parents expressed sadness and pity when their child had to forgo treats other children could enjoy. In some cases, children internalised these restrictions and avoided temptation on their own—but this came with emotional costs. One mother related to us:

"Once I saw her standing in front of an opened fridge. I rushed to her…But I found her just staring at the pudding in the fridge…she said she just want to look."

4. Negative Interactions with Healthcare Providers

Some parents felt judged or blamed by healthcare professionals when glucose



readings were poor. They reported feeling anxious before appointments, fearing scolding rather than support. A few even switched healthcare providers to find more empathetic and constructive care. Several mothers reported:

"One day before the appointment, I will start to feel anxious [showing both hands shaking]."

"Nurses always assume we don't care for our child. Which parents doesn't love their child?! I have been told, 'Do you want your child to die??'"

5. Lack of Awareness and Support from Others

Extended family members and neighbours often failed to understand the severity of T1DM. Some gave children unsuitable snacks, despite repeated explanations. This not only disrupted diabetes management but caused frustration and conflict.

"My neighbour gave my daughter a lollipop...I felt so angry...I have already told them before, but they just don't understand."

Some parents of younger children deliberately chose not to send their T1DM child into preschool until they were older enough to care for themselves. Teachers—especially in primary school—were also unprepared to support children with T1DM. Some parents were asked to administer insulin in inappropriate spaces like school toilets or libraries, making them feel excluded or burdensome. Several mothers said:
"Sometimes I arrived late at school and recess time was finished. I had to go to my daughter's class and request her to exit the class for a while. I can see the teacher doesn't like being disturbed."

"...we were told to do it (giving the injection) in the toilet or at a corner in the library. It feels like we're doing something wrong and shameful. It's so frustrating. But I don't complain much...I don't want to be seen as a needy demanding parent."

6. The Influence of Siblings and Grandparents

Older siblings sometimes unintentionally caused issues by eating or sharing forbidden food around the T1DM child. Grandparents, despite good intentions, often undermined parental efforts by giving treats or dismissing dietary restrictions, as one mother complained:

"Grandfather often buys those colourful candies whenever he came to the house. Repeatedly I reminded him not to do it...My father would claim that I was being paranoid and too restrictive to my child."

Why It Matters

This study highlights how the caregiving burden for childhood chronic illness extends beyond medical tasks. It affects sleep, work, family dynamics, emotional wellbeing, and social relationships (Chan & Shorey, 2022). Understanding this broader context helps us appreciate why parents feel overwhelmed and how their mental health can suffer as a result.

Without appropriate support, stressed caregivers may struggle to manage both the disease and family life. This can affect the child's health, the caregiver's wellbeing, and the emotional climate of the entire household (Shah *et al.*, 2021).

By using a socio-ecological perspective, we can see that effective care requires cooperation not just from parents and children, but from extended families, schools, employers, and healthcare providers.

Putting Socio-Ecological Thinking Into Practice: Recommendations for Action

The findings from this study point to several areas where practical changes could meaningfully improve the lives of parents caring for children T1DM childen. For healthcare providers, there is a strong need to shift from blame-based communication to a more empathetic and constructive style. Professionals should interpret blood sugar results within the context of the parent's lived experience—acknowledging their efforts and guiding them with reassurance (Zarora *et al.*, 2022). Training healthcare workers in Socio-ecological Thinking can improve this approach by helping them understand the broader network of people and stressors affecting the family. Trainings can be integrated into their continuous professional development courses as required by their respective regulatory bodies.

Clinical management should expand caregiver training programs beyond medical instructions and include emotional resilience, parenting strategies, and coping mechanisms. These programs can equip parents to better handle the emotional toll and reduce conflict at home. This ensures parents remain effective at home and productive at work. Parents with several years of experience caring for T1DM child can become mentors to newly diagnosed parents. This will act as both social support and technical assistance on parenting a T1DM child.

Targeted awareness campaigns to the stakeholders in the T1DM children's ecology would also help increase understanding of T1DM and reduce the misperceptions that fuel conflict and isolation for families (de Wit *et al.*, 2022). Healthcare practitioners may consider prescribing a social package in cases of children with chronic illness.

Collaboration with the School Health Unit under the District Health Offices may be useful for awareness training among teachers with a T1DM student. This would equip teachers with skills to respond appropriately to health-related concerns and reduce the stigma some parents feel.

Schools should be encouraged to create safe, designated spaces for diabetes care and develop routines in collaboration with parents that do not interfere with learning or dignity (Leocadio *et al*., 2023). Families and communities need greater awareness of T1DM to prevent well-meaning but harmful actions. Community education programs and culturally sensitive communication strategies can help extended family members and neighbours understand the serious nature of the condition and the importance of supporting dietary restrictions. Digital content can be created and distributed to the community through their parents. This would ensure collaborative effort from parents and the healthcare professionals.

Ultimately, any new policies or interventions should aim to promote the child's independence while supporting the parent's mental and emotional health. Parents benefit when their child learn to self-manage their condition, and this transition can be facilitated by healthcare providers and schools working together. Collaboration between healthcare professionals, school counselors, and experts from the National Family Planning Board is an important step towards this goal.

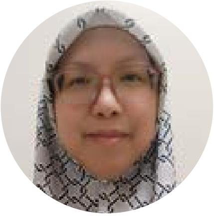
Finally, employers and policymakers can ease the burden on parents by recognizing caregiving responsibilities in workplace policies. Flexible working hours, job-sharing, or caregiving leave can allow parents to manage school visits and medical appointments without sacrificing their employment. Currently, tax incentives are available for caregiving parents and could be expanded to employers to encourage them accommodating such needs. Embedding Socio-ecological Thinking in public health and employment policies ensures these efforts are inclusive and realistic for families managing chronic illness. This ensures synergy in implementing insights into education, labour, and healthcare systems.

The Bottom Line

Healthcare systems and communities must support parents by understanding the full context of their caregiving experience. Socio-ecological Thinking offers a practical, compassionate framework for improving both medical outcomes and caregiver wellbeing.

About the Authors

Dr. Mohd Nazir Mohd Nazori is an academician, researcher, and a licensed counsellor with focus on health promotion and mental health. His research and community engagements have aimed to understand and improve mental well-being of individuals within healthcare setting, community-based centres, and at the workplace through the perspective of positive and health psychology. He currently serves as an Assistant Professor at the International Islamic University Malaysia, Kuantan Campus and previously a Visiting Counsellor at the Sultan Ahmad Shah Medical Centre. He can be contacted at: nazirnazori@iium.edu.my.



Dr. Nurulwahida Saad is a dedicated educator and researcher at the Kulliyyah of Allied Health Sciences, International Islamic University Malaysia. She holds a BSc in Biomedical Science (Brunel University, UK), an MSc in Epidemiology (University of Melbourne, Australia), and a PhD in Sociology and Anthropology (IIUM, Malaysia). Her interdisciplinary training inspires her to bridge medical science with sociocultural perspectives, promoting a holistic view of health and well-being. Her research interests include medical anthropology, women's health, and health psychology. She actively integrates these fields in her teaching and research. She can be contacted at nurulwahida@iium.edu.my.

Dr. Muhd Alwi Muhd Helmi is a paediatrician at the Sultan Ahmad Shah Medical Centre and medical lecturer at the Kulliyyah of Medicine, International Islamic University Malaysia. He holds a Bachelor of Medicine and Bachelor of Surgery degree from the University of Manchester, United Kingdom and a Master of Medicine in Paediatrics from Universiti Sains Malaysia, Malaysia. His interest spans into both medical and social aspect of paediatric care with special focus on endocrinology.

Dr. Muhamad Ariff Ibrahim is an organizational psychologist and lecturer at Kuliyyah of Allied Health Sciences, IIUM. He obtained his Doctor of Philosophy in Psychology, Doctor of Philosophy from Universiti Kebangsaan Malaysia (UKM). He also has a Master degree in (IO Psychology) from Universiti Kebangsaan Malaysia (UKM), and a Bachelor of Psychology with Honours (IO Psychology) from Universiti Malaysia Sabah (UMS). He has written numerous articles on mental health, eating behaviour and organizational psychology. He also contributed to book chapter regarding bully among adolescents and young adults. He can be contacted at email: ariffib@iium.edu.my

Community-Led Mental Health and NCD Intervention for Displaced Youth: The Brave Heart Project in Northern Nigeria – A Case Study

Authors: Miracle Adesina, Isaac Olufadewa, Ruth Oladele, Toluwase Ayorinde

Armed conflict in North-East Nigeria has displaced over three million people (International Organization for Migration, 2021), many of them adolescents and young adults at critical stages of development. Life in internally displaced persons (IDP) camps frequently erodes the structural supports young people need for optimal growth: access to education, work opportunities, and healthcare. In this fragile environment, psychological distress often goes untreated, while coping behaviors such as tobacco use, harmful alcohol consumption, and physical inactivity become normalized (Roberts & Browne, 2011; Schuch *et al*., 2017). Relatedly, about 60% of IDPs show signs of depression, and nearly half experience anxiety (Bedaso & Duko, 2022). These mental health burdens often coexist with other noncommunicable disease (NCDs), such as diabetes, chronic respiratory diseases, and cardiovascular disease (Akinrolie *et al*., 2022). Yet structured interventions addressing both mental health and NCDs are almost nonexistent in most camps (WHO, 2025; World Bank, 2016). The *Brave Heart* Project aims to address this gap by reducing depression and anxiety symptoms while tackling selected NCD risk factors (tobacco use, harmful alcohol consumption, and physical inactivity) among young IDPs in Northern Nigeria.

The Approach

Between 2021 and 2023, the *Brave Heart* project was implemented in two Abuja-based IDP camps, Durumi and New Kuchigoro. The Durumi camp, which is the largest in the city, houses over 4,500 IDPs, while New Kuchingoro is home to about 2,700 people. In both camps, children and youth comprise nearly half the population (Adesina *et al*., 2022; Olufadewa *et al*., 2024).

The goal of *Brave Heart* was to reduce depression and anxiety while addressing selected NCD risk factors among internally displaced youth aged 13–24, as part of a primary prevention strategy for chronic disease in this vulnerable population. To achieve this goal, the project merged basic cognitive behavioral therapy (CBT) with physical activity and peer support delivered through a task-sharing model. A total of

60 camp residents were trained by mental health professionals from the *Brave Heart* project team to become Community Mental Health Therapists (CMHTs), equipped to lead sessions in their language(s).

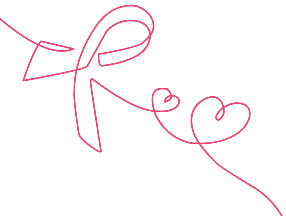
All participants were screened for depression and anxiety before enrollment using the well-validated PHQ-9, developed by Kroenke, Spitzer, and Williams (2001), and the GAD-7, developed by Spitzer, Kroenke, Williams, and Löwe (2006). They then attended 18 sessions held in purpose-built "Friendship Tents," designed to serve as safe spaces both physically and emotionally.

At baseline, we also assessed participants' tobacco and alcohol use, as well as their levels of physical activity. When initial engagement among female participants was low due to stigma, we adjusted messaging and involved trusted youth role models to encourage participation. Session times were also made more flexible to accommodate camp dynamics. This peer-led delivery model fostered trust, reduced dropouts, and ensured the pogram's relevance even in rapidly changing camp environments.

These insights gained throughout implementation helped tailor the support participants received, allowing the intervention to remain responsive to their evolving needs. Participants learned foundational CBT skills, progressing from identifying negative thought patterns and understanding the link between thoughts and feelings in early sessions, to practical problem-solving and goal-setting techniques in later ones. Each session included interactive elements such as group discussions, role-plays involving physical activity, and quizzes. Content was delivered in Hausa and adapted to be visual, accessible, and engaging, particularly for those with low literacy levels.

All participants provided informed consent; for minors, parental or guardian consent was obtained. Ethical approval was obtained from the Federal Capital Territory Health Research Ethics Committee (FHREC/2021/01/04/18-01-21).

The project team was responsible for logistics, monitoring and evaluation, and curriculum design. Funding was provided by Grand Challenges Canada and their Global Mental Health partners. Digital content delivery was supported by the SIMBIHealth app, which was specifically designed to provide facilitators offline access to session guides. The app also streamlined session delivery by enabling facilitators to follow structured lesson plans and capture participant responses in real time, even in low-connectivity settings.



Results

Of the 100 young people who enrolled, 83 completed all 18 sessions. Among the 17 who did not complete the program, common reasons included relocation from the camp, conflicting livelihood responsibilities, and, in a few cases, loss of interest.

Depression scores improved in 69% of participants, defined as a reduction of 5 points or more on the PHQ-9, a clinically meaningful change. Similarly, 40% showed clinically important improvement in anxiety, based on a ≥5-point drop on the GAD-7. Overall, paired-sample t-tests confirmed significant reductions in mean depression and anxiety scores from baseline to endline (PHQ-9: $t = 11.6$, $p < 0.001$; GAD-7: $t = 6.8$, $p < 0.001$), analyzed using SPSS version 26.

Beyond scores, participants reported better sleep, improved stress management, and renewed hope. They also reported making healthier choices, such as reducing or quitting tobacco and alcohol use and increasing physical activity. While not initially planned as part of *Brave Heart*, group activities evolved into peer-led football matches and communal movement routines. These were not just games; they became informal spaces for emotional release, bonding, and behavioral reinforcement.

Brave Heart also left behind a stronger ecosystem. It built a cadre of 60 trained CMHTs, empowered local facilitators, and introduced mental health support into camp life. The Friendship Tents remain as ongoing resources for mental health awareness and informal group support. While these contributions are promising, it is important to acknowledge that, in the absence of a fully matched comparison group, some observed improvements may reflect natural recovery or external influences over time. Still, we also observed youth leading their peers, helping others reject harmful behaviors, and speaking openly about their emotions. As one participant said, “The group games make my body light… and my mind too.”

Operating within IDP camps posed several logistical and structural challenges, including stigma around mental health, and low literacy levels. We prioritized flexibility, cultural sensitivity, and community ownership throughout the project. Looking ahead, we plan to scale *Brave Heart* to additional IDP camps across Nigeria, using the SIMBIHealth app and the *Brave Heart* Curriculum for community sensitization. To expand beyond IDP camps, we will adapt the curriculum for secondary schools by training teachers as CMHTs. We are engaging relevant government ministries to embed CMHT training into health systems and institutionalize monthly mental health days in camps.

Call-to-action

The *Brave Heart* experience offers valuable guidance for future policymaking and program design. First, local ownership is not just an option; it's a cornerstone. Training community members as mental health facilitators appeared both scalable and sustainable, fostering trust and enhancing engagement in a way that may have contributed to the program's reach and relevance. Secondly, integrated care shows promise. When mental health is addressed alongside behavior change and physical activity, young people may be better able to engage in and sustain healthier habits. Third, place matters. The creation of Friendship Tents provided more than shelter; they fostered safety, continuity, and a sense of belonging. These lessons remind us that effective solutions are most powerful when they reflect the realities of the communities they serve.

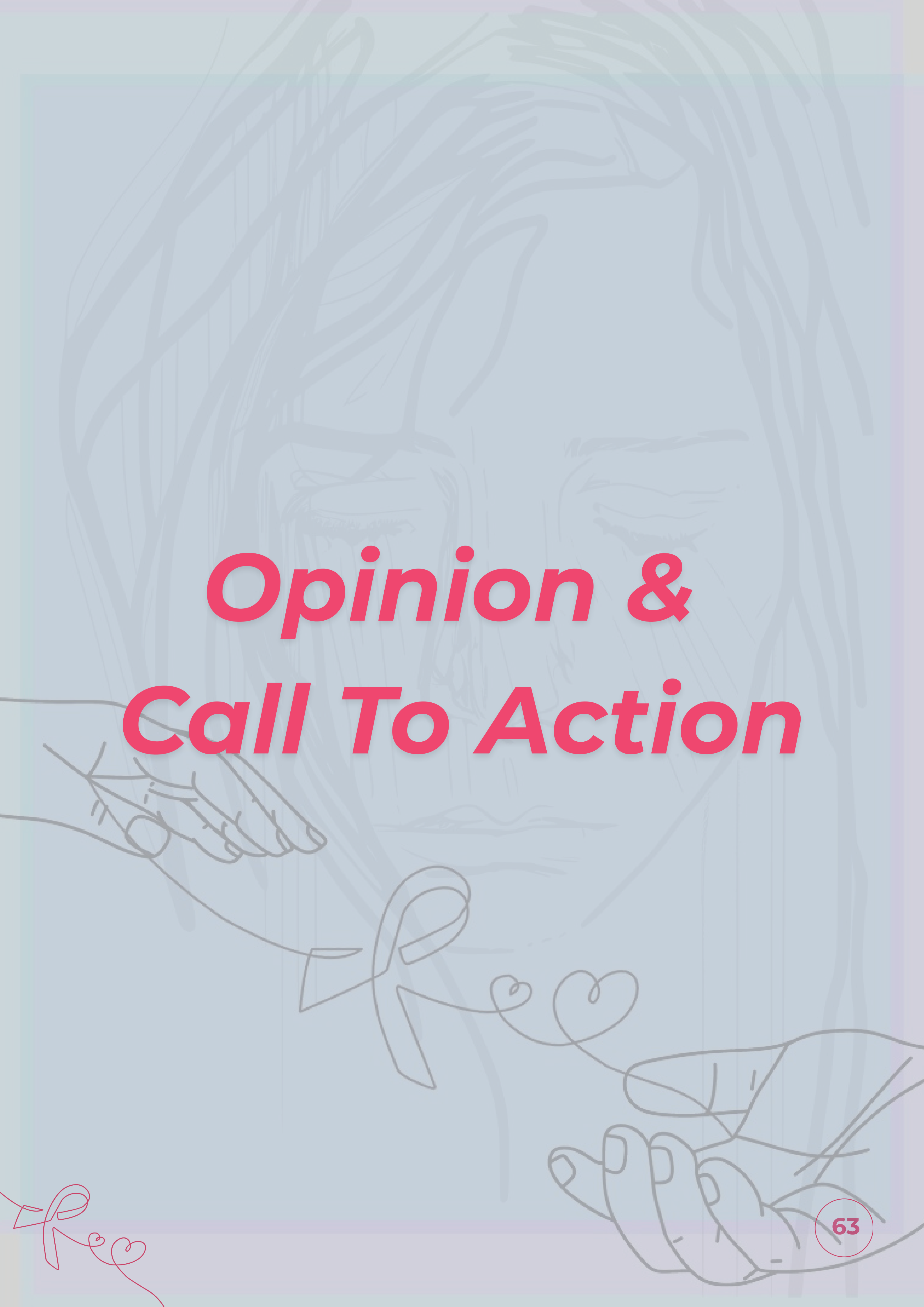
About the Authors

Miracle Adesina is a global mental health advocate and researcher with nearly a decade of experience leading community-driven health interventions in underserved settings. He currently leads as the Country Coordinator at Slum and Rural Health Initiative (SHRIN), he led the *Brave Heart* Project, which improved mental wellbeing for young internally displaced persons in Nigeria. His work bridges grassroots innovation with policy impact and has been featured by WHO, UNICEF, and The Lancet. A published scholar and PLOS ONE Academic Editor, Miracle focuses on scalable models for mental health prevention and promotion in underserved communities.

Dr. Isaac Olufadewa is a medical doctor, global health leader, and mental health advocate committed to youth-centered, rights-based care. He founded the Slum and Rural Health Initiative (SRHIN), where he champions equitable mental health services in underserved communities. Dr. Isaac led the implementation of the *Brave Heart* Project, promoting task-shifting and culturally relevant psychosocial support for displaced youth. He has advised the UN and WHO on youth mental health and is a respected voice in global health diplomacy. His work integrates research, advocacy, and systems innovation to close the mental health treatment gap across Africa.

Ruth Oladele is a Monitoring and Evaluation (M&E) specialist with a strong background in public health research. She has extensive experience designing and managing data systems for health interventions in low-resource settings. Her expertise spans mental health program evaluation, results-based reporting, and the development of culturally relevant indicators for psychosocial support programs. Ruth has supported a range of initiatives targeting youth, internally displaced persons, and marginalized communities across West Africa. She is committed to evidence-informed programming that improves access to mental health care and strengthens health systems through robust, community-led evaluation frameworks

Toluwase Olufadewa is a strategic partnerships expert focused on youth wellbeing, gender equity, and social impact. She currently serves as the Partnerships Officer at the Slum and Rural Health Initiative (SRHIN), where she leads cross-sector collaboration, stakeholder engagement, and institutional advocacy for health programs. Her work has supported initiatives on mental health, adolescent health, and sexual and reproductive rights. Toluwase is passionate about building sustainable, community-driven solutions and has coordinated programs that improve access to psychosocial care and reduce stigma.



Opinion & Call To Action

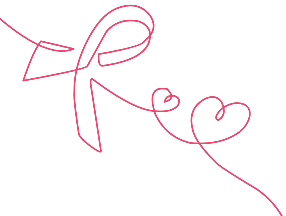
Mental Health and Noncommunicable Diseases in Balochistan

Author: Mahan Aslam

My understanding of mental health is not abstract. It comes from witnessing the lived realities of communities where stigma doesn't just sit within homes– it runs through entire systems. From the absence of mental health education in schools, to clinics that overlook emotional distress, to policy conversations where youth voices are missing, the system often treats mental suffering as invisible. Young people grow up carrying the weight of both physical illness and emotional pain, with few spaces to speak openly or seek help without fear or shame.

I come from Turbat, a city near the southeastern border with Iran. It takes around 12 hours by road to reach any major urban center, which makes it distant from many cities, with scattered populations along the way. Turbat is often described as the second most developed city in Balochistan, Pakistan, yet its infrastructure falls short of that claim. For people living in surrounding villages, even reaching the city is a challenge. Basic healthcare services are distant, and specialized care is nearly unreachable. People often travel from remote villages to Turbat seeking treatment, only to realize that necessary tests and medicines are unavailable. In most cases, they are advised to go to Karachi, the largest urban city in Pakistan and the closest major medical hub to Turbat. That journey requires financial resources, emotional resilience, and physical strength, which are resources that many families simply do not have. This is not just about a lack of services. It is about the neglect of an entire generation of people whose physical and mental health needs remain invisible in the current system.

Balochistan is Pakistan's largest province by land area, covering nearly 44 percent of the country's total territory. However, it has the smallest population, with communities widely scattered across remote and often inaccessible regions. Its health infrastructure is severely fragmented; resources are scarce, unequally distributed, and consistently underfunded compared to the scale of need. Facilities that do exist are often far from rural populations, making even basic care difficult to access. For example, the only dedicated mental health facility in the province is in Quetta, and it focuses primarily on treatment while preventive mental health measures are rarely implemented at the community level. As a result, vulnerable groups are left without early support, care, or awareness. Despite the magnitude of these challenges, funding and policy responses remain insufficient, failing to reflect the realities faced by those living on the margins.



The Triple Burden of NCDs and Mental Health in Balochistan

According to World Health Organization (WHO) and United Nations (UN) frameworks, mental health must be integrated into the response to noncommunicable diseases (NCDs), especially in underserved areas (World Health Organization, 2013; United Nations, 2019). Tools like the mhGAP and the Comprehensive Mental Health Action Plan offer practical guidance for making this possible (World Health Organization, 2021).

As a public health advocate, I also support integration. I have seen how NCDs impact the mental health of young people in our communities—but will these global frameworks truly work in Balochistan, where the health system is still fragmented and even basic care is often out of reach?

In Balochistan, young people face a triple burden. First, there are undiagnosed and untreated NCDs, many of which could be effectively managed if detected and treated early in local health facilities (World Health Organization, 2023). Second, the emotional burden from mental health stigma continues to prevent individuals from seeking help, which remains one of the most significant barriers to care (World Health Organization, 2021). Third, the psychological stress of living with chronic illnesses without proper support significantly increases rates of anxiety, depression, and emotional distress (BMC Psychiatry, 2021; World Health Organization).

Even treatable conditions like iron deficiency anemia require traveling to distant cities for care. I have witnessed this firsthand in my own family and among distant relatives who travelled all the way to Karachi for a condition that could have been managed locally. In some cases, the illness was misdiagnosed, and after all the emotional and financial strain of the journey, they were given simply iron and Vitamin D tablets. Were local health facilities able to provide timely and accessible care, such emotionally exhausting and financially unbearable could have been avoided. Clearly, it is not just illness causing suffering, but a system of intertwined burdens that make the experience of illness more painful and isolating.

The health system has failed to adequately address both NCDs and their impact on mental health. Addressing these issues can no longer be delayed, especially as regions like Balochistan grow increasingly vulnerable to climate change. If we continue to ignore existing challenges, the added burden will only make conditions more severe. To create meaningful change, we need a healthcare system that simultaneously treats both brain and body and responds to the lived realities young people face every day.

Stories of Lived Experience

Evidence consistently shows that young people with chronic physical illnesses are at increased risk of depression, anxiety, and delayed treatment outcomes when their mental health is not addressed (World Health Organization, 2021). I have seen this in real life through the shared stories of a fellow medical student. A female patient with undiagnosed type 2 diabetes developed a cut that progressed to gangrene. She was advised to undergo an amputation, but she refused, saying she had goats to care for and responsibilities at home. No one knows what happened to her afterward because she never returned to the clinic. In another case, a young mother suffering from severe postpartum depression tragically killed her newborn and later took her own life. There had been no diagnosis, no follow-up, and no support.

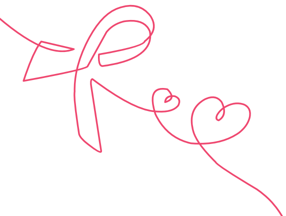
These are not isolated incidents. They reflect the painful consequences of a system that fails to provide basic awareness, early prevention, and compassionate mental health care. Even minimal interventions at the community level could have prevented both outcomes.

Practical Solutions to a Grave Problem

The solution lies in practical, community-led, and policy-supported integration: training frontline workers, integrating mental health into primary care, using telemedicine, supporting schools, and offering local fellowships.

Training frontline health workers. Training existing providers, especially Lady Health Workers, nurses, and staff at Basic Health Units, to recognize early signs of mental distress in young people living with chronic NCDs such as diabetes, asthma, chronic obstructive pulmonary disease, and cancer is a critical first step Globally recognized approaches such as WHO's Mental Health Gap Action Program (mhGAP) train non-specialist health workers to screen for anxiety, depression, and trauma with low-cost tools and to also make referrals.

Recent findings from Pakistan further underscore this need: a 2023 study found significant gaps in the current Lady Health Worker curriculum, highlighting that without appropriate mental health training, frontline workers may miss crucial opportunities for early detection and support (Rabbani *et al.*, 2023). Schools can also play a transformative role by promoting mental well-being through peer support networks, age-appropriate workshops, and teacher training. In partnership with Lady Health Workers, teachers trained to recognize early signs of emotional distress can guide struggling students and their often affected families toward available support.

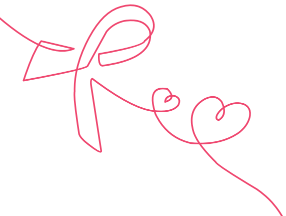


These simple, community-driven interventions can prevent crises before they escalate. This approach does not require building new psychiatric hospitals, but only the political will to invest in our existing health infrastructure and reimagine it with compassion and care.

Telehealth. Linking local clinics to urban psychiatrists and counselors via video consultations can bring timely and specialised support closer to young people who might otherwise go without care. Such models not only reduce the travel and financial burden on patients but also help local health workers build capacity by working alongside specialists in real time. However, this promise is only as strong as the infrastructure that supports it. Expanding digital connectivity in rural and remote areas is a foundational requirement, as even the most innovative telepsychiatry programs risk leaving behind the very populations they aim to serve if they lack stable, affordable, and high-speed internet (Bashshur *et al.*, 2016; Acharibasam & Wynn, 2018). In Pakistan, nurse-assisted telepsychiatry initiatives have already shown that digital tools can be adapted for large-scale mental health screening, diagnosis, and referral, even in low-resource settings (Akhtar *et al*., 2025). These examples point to the potential of scaling such interventions nationally, provided they are paired with sustained investments in infrastructure, community awareness, and culturally sensitive service delivery.

Health stations. Another important step is building health stations along main travel routes from remote villages to cities like Turbat or Karachi. These stations can provide trained health workers, basic medicines, and emotional support for families traveling long distances to find care. Beyond Balochistan, many other places face the same inaccessibility and mental health stigma challenges. Solutions must fit the realities of under-resourced areas and build on what already exists. Public awareness also matters: local language campaigns, theatre, storytelling, and social media can help reduce stigma and teach people about the link between NCDs and mental health.

The Ministry of Health must include youth mental health in national plans, and the Balochistan Health Department should pilot integrated programs, including these travel-route stations. These interventions do not require entirely new infrastructure; they are possible because they build on what already exists. Instead, they require reallocation of attention and resources. Training a health worker to ask a young person how they are feeling emotionally during a physical checkup costs little, but the impact can be life-changing. Building health support stations along existing travel routes enhances safety and access using infrastructure we already rely on.



Global Implications

Baluchistan is not alone. Many regions across the Global South face similar challenges where distance, poverty, and stigma intersect with weak health systems. There is a need for a global framework that centers the realities of under-resourced settings. WHO should work closely with local communities, governments, and civil society to co-create a model that is not imported or unfamiliar, but grounded in local systems. This framework should be flexible enough to integrate with existing structures—even where capacity is limited—and strong enough to guide long-term investment in youth-centered, holistic care.

If we continue to do nothing, we will see a deepening crisis. More young people will suffer in silence with untreated mental health conditions. Chronic diseases will go unmanaged due to depression, anxiety, or lack of support. We will continue losing lives, not just to disease, but to despair. What we are facing is not just a health crisis. It is a human one. The emotional suffering of young people managing illness without support is real and preventable. Their stories demand action, not pity.

About the Author

Mahan Aslam is a recent medical graduate from Bolan University of Medical and Health Sciences, Quetta, and the Co-founder of Baloch Zaalbol Hub—an initiative dedicated to empowering young girls through health education, mental well-being, and leadership development. Her academic interests include public health, mental health, and women's health, with a focus on culturally responsive care and community engagement in underserved regions.

The Protective Power of Parenting: Safeguarding Children’s Minds and Bodies

Authors: Kavitha Kolappa Porchet, Tido von Schoen-Angerer, Scarlet-Kali Soriano, Darshan H. Mehta, Robert Waldinger, Gregory L. Fricchione

Young people globally are facing concurrent epidemics of mental health conditions and noncommunicable diseases (NCDs). Growing evidence reveals these dual epidemics may share developmental origins; there are inextricable links between mental and physical health conditions, specifically those stemming from childhood adversity. We also have new insights into solutions that protect our children, starting with the most powerful instrument to safeguard their health: parenting. Our call to action presents recommendations for harnessing the power of parenting to nurture child health and lifelong well-being.

The epidemiological evidence is clear: childhood adversities bestow lifetime risks for both mental and physical health conditions (Von Korff *et al*., 2009). According to World Mental Health Survey data from over twenty countries, 30% of all mental health conditions across the life course can be attributed to childhood adversities. More specifically, these adversities are linked to 23% of mood disorders, 31% of anxiety disorders, 42% of behavioral disorders, and 28% of substance use disorders. These associations are even more pronounced for mental health conditions that emerge in childhood or adolescence (Kessler *et al*., 2010).

Notably, not all childhood adversities have equal impacts on our mental health. Among them, family maladaptive functioning emerges as the most consequential. This category includes maltreatment/abuse, neglect, parental mental health conditions, parental substance use, parental criminal behavior, and violence in the home – in other words, challenges marked by (or contributing to) parenting difficulties. Family dysfunction carries the strongest association for mental health conditions at every age, with 1.5 to 2.4 times the risk of that carried by children who are spared such adversities (Kessler *et al*., 2010).

Early adversities also heighten risks for NCDs, including hypertension, obesity, diabetes, and heart disease (Von Korff *et al*., 2009). Here, too, we can see data highlighting the dangers of family dysfunction: for example, exposure to family dysfunction yields a 1.2 to 1.3 times higher risk for adult hypertension (Stein *et al.*, 2010). Additionally, exposure to physical abuse, parental substance use, or criminal behavior confers a 1.3 to 1.8 times higher risk of adult diabetes (Von Korff *et al*., 2009). While most NCDs appear later in life, large registry data also show relationships between adversities and the onsets of asthma and obesity in childhood, as well as diabetes in young adulthood (Bhan *et al*., 2014; McKelvey *et al*., 2019; Elsenburg *et al*., 2023).

There is a well-known reciprocal relationship between mental and physical health conditions (Kolappa *et al*., 2013). We now know they often stem from shared origins owing to family-related adversities. Family dysfunction can constitute "toxic stress" for children, which is persistent stress that is unmitigated by a nurturing caregiver (Shonkoff *et al*., 2012). Toxic stress impacts brain development and stress physiology; in particular, it heightens activity of brain structures that amplify fear responses (e.g., the amygdala) and weakens structures responsible for emotional regulation and attenuating fear (e.g., the anterior cingulate). Both changes increase inflammatory stress on the brain and body, subsequently elevating the risks of mental health conditions and NCDs.

By contrast, research on lifespan development demonstrates that growing up in warm, nurturing family environments is linked to improved mental health, better perceived physical health, and stronger attachment security to spouses decades later (Chen *et al*., 2019; Waldinger & Schulz, 2016; Shah *et al*., 2014). What we can take away from this evidence is that children can handle numerous stressors, especially if warm and reliable caregivers help modulate the stress they experience. Without this buffering effect, however, children are more vulnerable to mental and physical ill-health. The family environment - and parenting - is therefore a child's first line of defense against the health impacts of stress.

Unfortunately, parenting remains undervalued in modern society. Parents face increasing tensions from global insecurity, financial strain, work pressures, and time constraints, all the while benefitting from less support in our increasingly individualistic societies (Office of the Surgeon General, 2024). The former United States Surgeon General, Vivek Murthy, compellingly stated that parenting is now seen as a solo sport when it was once viewed as a team sport (Jargon, 2024). Importantly, parents do not exist in a vacuum; adversity begets adversity, both within communities and across generations. Most parenting interventions focus solely on parents' behaviors towards their children, rarely addressing the societal and community-level factors affecting parents' own health and well-being.

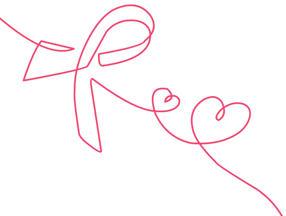
Chronic exposure to historic, systemic, and personal adversities can make it harder for parents to manage their own stress while attempting to stay attuned to their children. These stressors are exacerbated in conflicts, natural disasters, and very-low resource settings. Considering this, global investment in support for parents is abysmal. A 2017 UNICEF analysis found that just fifteen countries had adopted three basic family-friendly policies—namely, 1) six months of paid maternal and four weeks of paid paternal leave, 2) half a year of paid breastfeeding breaks at work, and 3) two years of free pre-primary education. These policies are vital to reduce financial and emotional strain on parents. The same analysis found that 85 million children globally lived in countries where none of these policies were in place (United Nation Children's Fund, 2017).

For at-risk families, intervening early with child care and in-home support can generate astronomical gains for development and health (Heckman, 2006; Garcia *et al*., 2021). Interventions delivered at the community-level, such as parent-child interaction therapy, may be of especially high value (Calderone *et al*., 2025). Interestingly, some promising interventions to improve parent and child well-being utilize mind-body strategies, such as mindful parenting (Potharst *et al*., 2021). These interventions draw on the wisdom of traditional practices that aim to harmonize the very stress physiology that is often dysregulated in chronically overwhelmed parents. As parents develop enhanced self-awareness and emotional regulation, they can more easily co-regulate with their children.

Our recommendations for actions to support parenting to protect child health are as follows:

International and national levels:
- Generate political will to recognize the importance of parenting and caregiving for child, youth, and lifelong health
- Prioritize paid parental leave irrespective of citizenship/immigration status, employment, gender identification, sexual orientation, or family configuration
- Ensure payment for the work of breastfeeding, which is known to support healthy attachment and positive health outcomes
- Fund research in diverse socioeconomic and cultural settings to understand factors that support healthy parenting, as well as to develop effective identification of at-risk families, efficient referral pathways, and culturally-relevant and trauma-informed interventions
- Develop normative standards and guidelines for early childhood programs

District, local, and community levels:
- Ensure affordable, accessible mental and physical health care for all parents and caregivers, including additional support for parents in the postpartum period
- Develop programs that provide material and social support for at-risk families, based on best-available evidence for that context



- Maximize health insurance coverage and reimbursement for parenting support (e.g., parent-child interaction therapy and mind-body interventions)
- Establish community-based parenting support programs that can be delivered by trained non-specialists in resource-limited settings and humanitarian contexts
- Mandate trainings and continuing education for relevant professionals in healthcare, education, and social work to: recognize the signs of parenting burnout, child maltreatment, and family dysfunction, and provide brief interventions with referral to services when needed.

Employer level:

- Prioritize parental leave and compensation for the work of breastfeeding when not federally guaranteed
- Subsidize childcare and early education where possible
- Provide flexible hours for parents to prioritize the wellbeing of children

The time has come to recognize that many mental and physical health conditions we see across the life course have developmental origins related to childhood adversity, especially family dysfunction. Parenting is indeed a child's first line of defense against the impacts of stress. Appreciating the foundational role of parenting in safeguarding the health of the world's children necessitates intersectoral actions at all levels of society. Doing so will bring countless gains – helping children now and for generations to come.

About the Authors

Kavitha Kolappa Porchet, MD, MPH, Consultant, The Chester M. Pierce, MD Division of Global Psychiatry, Massachusetts General Hospital: Kavitha Kolappa Porchet, MD, MPH, is a psychiatrist specializing in the public health and societal implications of brain development and brain/body medicine. Her academic interests include evolutionary neuropsychiatry, stress physiology, resilience, and mindful parenting. She has worked in various capacities with the Global Health Council, International Rescue Committee, Médecins Sans Frontières, and Universities Allied for Essential Medicines. She has also consulted extensively for the World Health Organization's Department of Mental Health, Brain Health, and Substance Use, most recently serving as the lead author of WHO's position paper, "Optimizing brain health across the life course," which was released in 2022.

Tido von Schoen-Angerer, MD, MPH, President, Traditional, Complementary and Integrative Health Coalition: Tido von Schoen-Angerer, MD, MPH is a consultant pediatrician at the Multidisciplinary Center for Integrative Medicine at Geneva University Hospitals, Switzerland and the president of the Traditional, Complementary and Integrative Healthcare Coalition. He holds a medical degree from Uppsala University, Sweden and a Master in Public Health from the London School of Hygiene & Tropical Medicine.

Scarlet-Kali Soriano, Board Member, Traditional, Complementary & Integrative Healthcare Coalition. Board Member, Academy of Integrative Health & Medicine. Director of Duke Health & Well-Being Community Health and Leadership Programs, Duke University Health System: At Duke Health, Dr. Soriano leads a multidisciplinary team focused on innovative, equity-based health and well-being interventions. Her work is instrumental in addressing critical gaps in our healthcare delivery systems. With a deep commitment to community health, mental well-being, and healthcare redesign, Dr. Soriano's previous roles include Director for Group Visits and Wellness-Based Healthcare Transformation at Boston Medical Center, and Medical Director at the Tanya I Edwards Center for Integrative and Lifestyle Medicine at Cleveland Clinic.

Darshan Mehta, MD, MPH, Assistant Professor of Medicine and Psychiatry, Harvard Medical School: Darshan Mehta, MD, MPH, is an Assistant Professor in Medicine and Psychiatry at Harvard Medical School. He is the Medical Director of the Benson-Henry Institute for Mind Body Medicine at Massachusetts General Hospital (MGH) and the Medical and Education Director for the Osher Center for Integrative Health at Brigham and Women's Hospital. He served as the inaugural director for the Office for Well-Being at MGH and is currently Co-Director of the MassGeneral Brigham Center for Comprehensive Healing. His interests and expertise include complementary and integrative medicine curricular development, mind-body interventions in health professions training, and promoting professionalism in medical trainees.

Robert Waldinger, MD, Professor of Psychiatry, Harvard Medical School; Director, Harvard Study of Adult Development, Massachusetts General Hospital: Robert Waldinger, MD, is Professor of Psychiatry at Harvard Medical School and Director of the Harvard Study of Adult Development at Massachusetts General Hospital in Boston, Massachusetts. The Harvard Study has tracked the lives of 724 families across 87 years to understand the predictors of wellbeing through the life cycle. His research expertise is in lifespan developmental science, and his clinical expertise is in psychoanalytic psychotherapy.

Gregory L. Fricchione, MD, Associate Chief of Psychiatry, Director of the Benson-Henry Institute for Mind Body Medicine, Massachusetts General Hospital: Gregory L. Fricchione, MD, is Associate Chief of Psychiatry, Director of the Benson-Henry Institute for Mind Body Medicine, Director Emeritus of the Chester M. Pierce, MD, Division of Global Psychiatry, and Director Emeritus of the Division of Psychiatry and Medicine in the Department of Psychiatry at Massachusetts General Hospital (MGH). He is also Co-Director of the McCance Center for Brain Health at MGH and the Benson Mind Body Medicine Professor of Psychiatry at Harvard Medical School. His research interests include catatonia, stress, resilience and how the comparative neurology of brain evolution illuminates our concepts of health, illness and medical caregiving.

Beyond the body: Nurturing the Wellbeing of Youth with Chronic Illness in Humanitarian Settings

Authors: Dr. Sarah Wilson and Zeinab Ajami

Imagine being 9 years old, newly diagnosed with Type 1 diabetes, and living in a tent with no refrigeration for insulin, no blood glucose measuring devices, no healthy food, no proper health care services, and no one to take care of you and support your wellbeing.

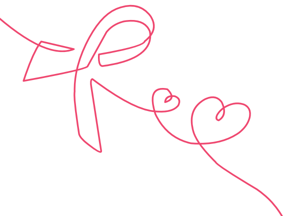
A Problem We Cannot Ignore

In humanitarian emergencies, we are often quick to act on visible suffering—wounds, hunger, shelter, disease. But there's a quieter crisis unfolding: children and youth living with chronic illnesses are slipping through the cracks of fragmented care systems. This is complicated by disrupted care and infrastructure, unavailability of health workers, shift in priorities, and even contracting new health problems (World Health Organization, 2018). These young people are not only battling lifelong diseases; they're doing so while facing fear, instability, and loss, often without the support needed to cope and recover.

Here is the fact we must confront: mental health support for children and adolescents with noncommunicable diseases (NCDs) in humanitarian settings is not a luxury. It is a lifesaving medical and moral necessity. It is time we stopped separating physical health from emotional wellbeing and recognize that for young people with chronic illness, especially in emergencies, the two are inextricably linked (Stein *et al*., 2019). Mental health support isn't just about feeling better – for these children, it can mean the difference between life and death.

Children with NCDs may go months without access to basic healthcare. Moreover, diagnoses made during emergencies are particularly traumatic—children and families face the shock of life-altering news in an environment already marked by chaos and uncertainty. The psychological consequences of such compounded trauma can impair treatment adherence, strain caregiver-child relationships, and result in long-term mental health issues (Guerra *et al*., 2012; Aebischer Perone *et al*., 2017).

Such experiences impact more than just young people's physical health—they influence their emotions, self-esteem, relationships, and future aspirations.



When such stress happens during critical developmental stages such as early childhood or adolescence, the effects can be especially profound and long-lasting (Guerra *et al*., 2012).

Mental health is a critical determinant of how well a young person can manage their illness, engage in learning, build relationships, and survive trauma. Ignoring their mental health today guarantees steeper costs tomorrow; worse health outcomes, long term mental health predicaments, disrupted social support systems, and much more (Aebischer Perone *et al*., 2017).

The Evidence is Clear—and Practical

Evidence suggests that NCDs—such as heart disease, cancer, diabetes, and respiratory illnesses—are the global leading cause of death (World Health Organization, 2024) and that people living with NCDs are more likely to experience mental health conditions than those who do not (Gyawali *et al*., 2021).

But evidence also suggests that group-based interventions for people with NCDs have shown to improve their mental wellbeing, confidence in managing their health, understanding of their condition, and overall quality of life (Jackson *et al*., 2019).

To translate this into practical action, the author piloted an intervention at a refugee transit center, introducing peer support group sessions for adults living with chronic illnesses. The main objectives of these sessions were to provide psychoeducation, enhance coping strategies, and strengthen social networks, with the ultimate aim of improving health outcomes.

Adults living with NCDs who were seeking healthcare services were invited to participate in sessions exploring emotional wellbeing and its relationship to NCDs. Participants included individuals living with chronic back pain, hypertension, diabetes, obesity, as well as caregivers of children with neurodevelopmental conditions.

These sessions were co-facilitated by both mental health and medical professionals, with the support of community volunteers and interpreters as required. The facilitation approach was person-centered and interactive, incorporating case scenarios relevant to the participants’ lived experiences. Open-ended, probing questions were used to promote active engagement, enabling them to share personal experiences on the impact of NCDs on their wellbeing and quality of life, effective coping strategies, perspectives on treatment adherence, and the perceived role of community, spirituality, and culturally grounded practices in managing health related issues.

> *"I need to monitor how I am feeling very closely and if I am not feeling well, I get the urge that I need to go immediately to the hospital. This is stressful and can be a burden (also for my family) as I always need to know where the nearest clinic is."*
>
> *Adult male participant living with a cardiac condition*

Qualitative feedback was collected through open-ended evaluation questions administered at the end of the sessions through which participants reported reductions in feelings of distress and isolation, alongside perceived strengthening of peer and caregiver networks.

Building on the positive outcomes observed in this pilot, there is strong potential to adapt and replicate this intervention to children living with NCDs. The core principles of this model (creating peer support, reducing feelings of isolation, and empowering individuals to manage their health) are just as critical, if not more so, for children and adolescents whose social connections and sense of agency are foundational to their development.

To ensure relevance, adaptations would be required to meet the developmental, cognitive, and psychosocial needs of a younger cohort. This could be in the form of employing creative, child-centered approaches such as storytelling, role-play, art, visual aids, and drama, which have demonstrated effectiveness in helping children process stressful experiences. Research indicates that these methods provide multiple benefits for children: they offer a safe way to express and process difficult emotions non-verbally, reduce the stress associated with discussing traumatic experiences by allowing creative expression through art or imagery, enhance self-awareness and personal agency, facilitate meaning-making, and support the development of coping skills while reflecting on challenging experiences (Bosgraaf *et al*., 2020).

Parallel or joint caregiver–child sessions could also be included to strengthen family support systems, improve communication about health and emotional wellbeing, and foster collaborative problem-solving around treatment adherence and daily self-care routines.

What makes this approach particularly powerful is its adaptability: regardless of context—whether in a refugee camp in Sudan or a conflict-affected area of Ukraine—the core principles remain consistent, emphasizing engagement with people with lived experiences, leveraging existing community resources, cultural adaptation of interventions, and strengthening coordination with relevant actors.

What Needs to Change—and How

Building on these insights, integrating mental health into care for young people with NCDs must become standard practice—and cannot remain an afterthought.

Here is a list of actionable steps:

1.Embed mental health care into all NCD programming for children and youth

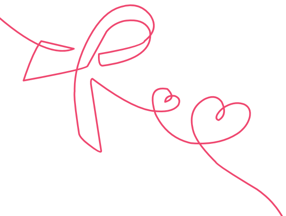
- We call upon **ministries of health and other relevant governing bodies** to update guidelines so mental health screenings and referrals are part of routine medical care.
- We call upon **healthcare providers and NGOs** to train staff on how to check in on children’s psychosocial wellbeing during medical visits and link them to peer networks and group-based psychosocial support.
- We call upon **donors and UN agencies** to fund integrated programmes rather than separate medical and mental health services and to support proposals that mainstream gender, disability, and conflict sensitivity considerations.

2.Design youth-friendly group interventions

- We call upon **youth led initiatives and NGOs** to co-design activities with young people with lived experiences, ensuring interventions reflect their needs, priorities, resources and cultural considerations.
- We call upon **mental health professionals and trained facilitators** to use approaches that foster emotional expression, build self-efficacy, and promote shared problem-solving.
- We call upon **donors and UN agencies** to invest in scalable, youth-friendly group-based models that integrate creativity, cultural relevance, and peer support.

3.Train and support frontline workers

- We call upon **ministries of health, education, and social services** to integrate training on child and adolescent development, psychoeducation, trauma-informed care, and chronic disease literacy into existing capacity building initiatives.
- We call upon **NGOs and community-based organizations** to provide on-the-job training, and structured supervision to sustain quality of the services provided.
- We call upon **donors and UN agencies** to fund capacity-building and evidence-based supervision initiatives that equip frontline workers to address both the physical and psychosocial needs of children and adolescents living in emergency and post-crisis settings.



4.Develop context-specific education materials

- We call upon NGOs, community-based organizations, and professional associations to support the development of visual aids, audio materials, and media content tailored for low-resource settings and to engage people with lived experience in co-creating and reviewing content to ensure relevance and impact.
- We call upon donors and UN agencies to fund the translation, adaptation, and cultural contextualization of educational materials, so they are accessible and effective across diverse communities.

5.Align policies and funding with integrated care models

- We call upon ministries of health and social affairs, national coordination bodies, and local NGOs to ensure that mental health is integrated into existing health system frameworks.
- We call upon UN agencies and donors to prioritize funding models that strengthen and adapt current systems, avoiding the creation of separate, siloed services.
- We call upon all stakeholders to collaborate in aligning resources, policies, and implementation plans so mental health becomes an integral part of comprehensive care for children with chronic illnesses.

A Final Word: Don’t Look Away

If we truly care about children in crisis, we must act like it — by giving them the full, holistic care they need. Their mental health is just as lifesaving as their medicine. Only when we support both their bodies and minds can they survive chronic illness and grow into the future we all hope to see.

When designing NCD interventions, ask yourself: Where is the mental health component? Whose voices are we leaving out? And what will it take to ensure that every child with a chronic condition receives the complete care they need — not just fragments of it?

To look away now is to fail them not just today, but for the rest of their lives. They are the future, and they deserve nothing less than our full commitment.

About the Authors

Dr. Sarah Wilson is a neuropsychiatrist and a mental health and psychosocial support (MHPSS) program manager with over a decade of experience, including five years in humanitarian and emergency contexts. She has led MHPSS programs in Germany, Iraq, and Lebanon and served as an instructor in the diploma of child and adolescent mental health in humanitarian settings with the American University of Beirut. Dr. Wilson’s expertise spans academia, strategic leadership with donors and governments, integration of mental health across sectors, technical and clinical supervision to field teams, development of technical guidelines and combining fieldwork with academic engagement.

Zeinab Ajami is a Clinical Psychologist and MHPSS Specialist with over eight years of international experience in humanitarian and development settings. Her work focuses on strengthening local capacity, designing culturally responsive, community-based MHPSS interventions, and fostering strategic partnerships with governments, NGOs, and stakeholders. Zeinab has led training initiatives, contributed to program design, and engaged in policy-level coordination with a strong emphasis on trauma-informed, rights-based, and gender-sensitive approaches. She is deeply committed to integrating MHPSS into health, protection, and education sectors, and to promoting sustainable mental health systems and resilient communities.

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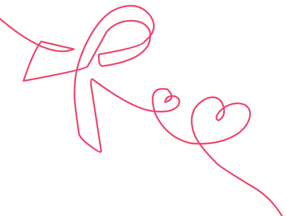

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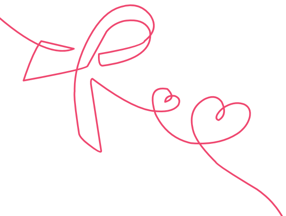

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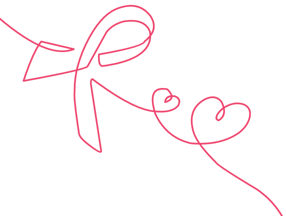

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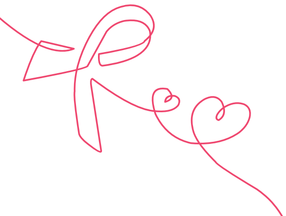

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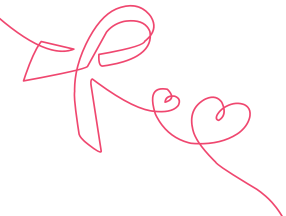

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