Evidence Brief | Spotlight Series No. 5

This evidence brief brings together insights from four presentations delivered during a special edition of the CAPCHA Spotlight Webinar Series themed, From Invisible Stress to Lifelong Impact: Climate Change and Brain Health Across the Lifespan.

Presenters:

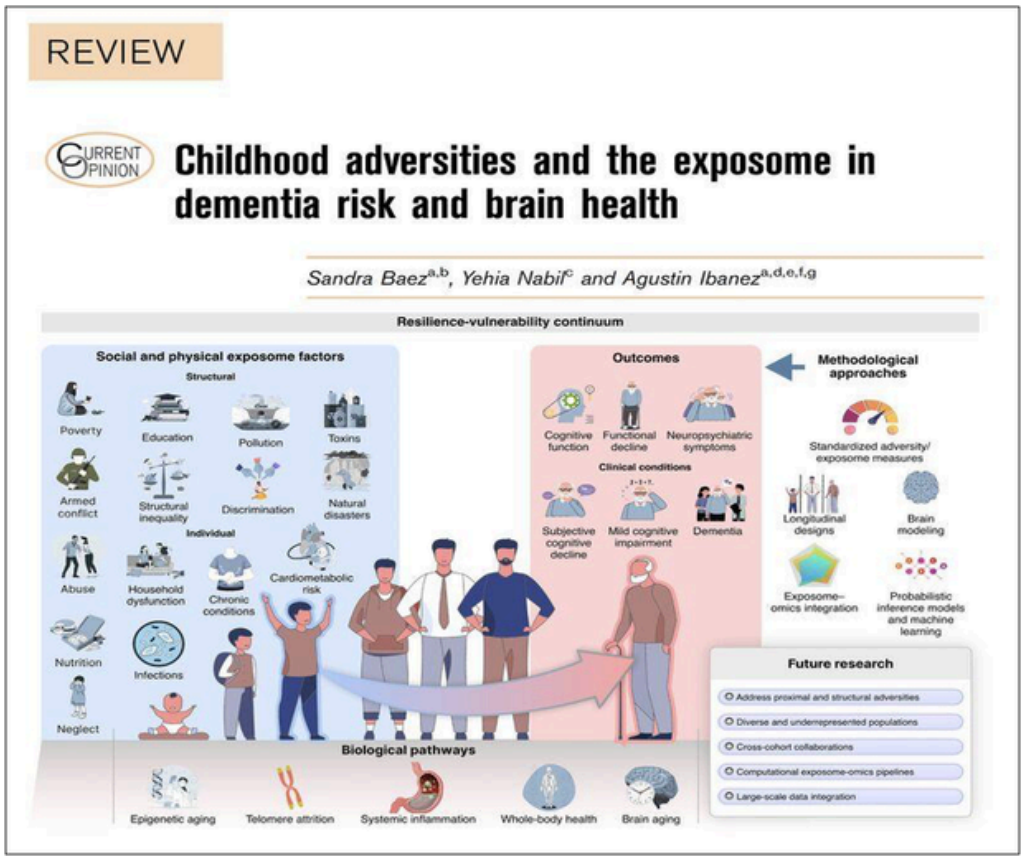
a)Dr. Burcin Ikiz of the Neuro Climate Working Group - 'Our Brains and the Changing Climate'
b)Dr. Moses Mutua Mutiso from University of the Western Cape and Moi University - 'Parenting in a Climate Crisis'
c)Svetlana Onye, Executive Director SustyVibes, and Head of Ecoanxiety Africa Project - 'Eco-anxiety and Resilience'
d)Enock Mulwa, Founder and CEO of the Tujiangalie Africa Foundation - 'The Psychological Frontier: Decolonizing Climate Resilience Through Mental Health Integration'.

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Climate change is usually measured in degrees, tonnes of carbon, hectares lost, and mortality rates after a disaster. Its psychological impacts are far harder to see. They begin before birth, build through childhood and adolescence, and shape the risk of anxiety, depression, cognitive decline and dementia in later life. Across four presentations, speakers made the same case from different angles: the mental and neurological burden of climate change is real, it falls hardest on those already most exposed, and it remains largely absent from climate, health and disaster policy. The task is to make this invisible impact visible and to design responses that protect people.

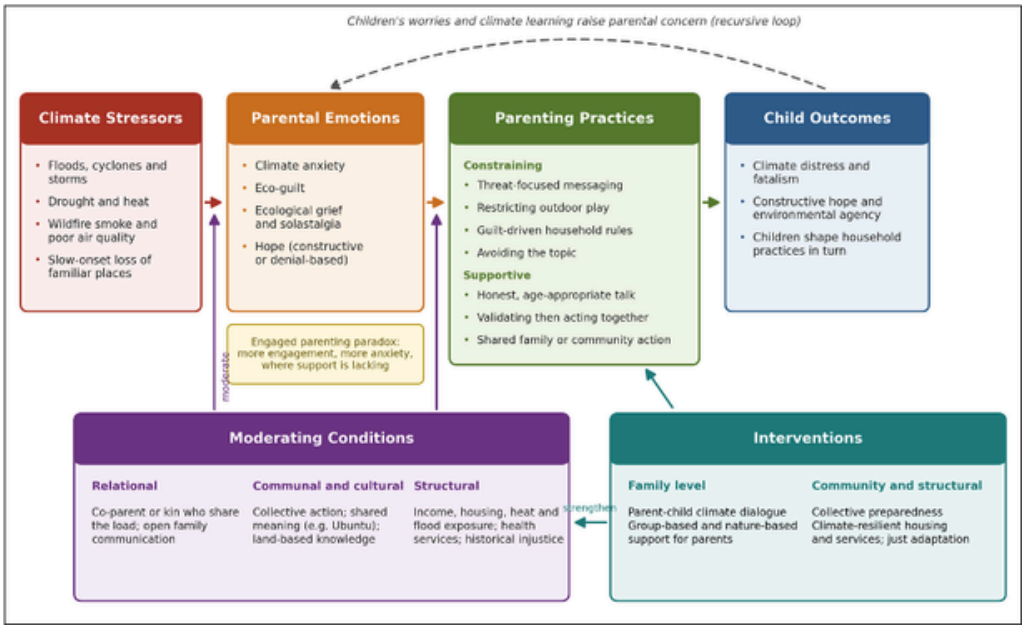
Climate Change is Brain Health Issues

Dr. Burcin Ikiz of the Neuro Climate Working Group showed that our brains are shaped by the environments we live in. Extreme heat strains the nervous system's ability to regulate temperature, worsening conditions such as epilepsy, dementia and schizophrenia, raising the risk of stroke, impairing memory, attention and executive function, while increasing stress, aggression and suicide risk. Fine particles from air pollution cross the blood-brain barrier and drive inflammation and neurodegeneration, with effects that run across the whole lifespan: altered brain connectivity before birth, slower motor and cognitive development in infancy, higher risk of neurodevelopmental disorders in childhood, anxiety, depression and psychosis in early adulthood, and cerebrovascular disease and dementia in later life. Extreme weather adds post-traumatic stress, depression and anxiety, often prolonged by displacement and the loss of homes and livelihoods. These exposures rarely act alone. Dr. Ikiz's case study from Guinea-Bissau, showed how heat, heavy rain, flooding and zinc-roofed housing combined with economic and food insecurity, to limit access to health care for women moving between rural and urban areas. It also noted the heavy caregiving burden which produced anxiety, sleep problems and chronic fatigue.



The Hidden Burden Inside Families

Dr. Moses Mutua Mutiso turned the focus to families, presenting an integrated review of 100 sources published between 1990 and 2026. The review shows that parents carry much of the climate burden their children feel. About one billion children live in countries at extremely high climate risk, and 59% of 10,000 young people surveyed in ten countries reported being extremely worried about climate change. The evidence points to an engaged-parenting paradox: the parents most involved in climate issues report the most anxiety, and that anxiety is linked to more controlling and inconsistent parenting. This distress does not stay with parents but reaches children before birth, through everyday caregiving and through lost livelihoods. After Cyclone Freddy struck Malawi in 2023, the share of mothers reporting distress fell from 17% to 6%, yet the odds of child stunting rose about three times and later six times. Similarly, in Kenya's arid counties, food insecurity was closely associated with caregivers' mental health, with 79% of 446 caregivers experiencing severe food insecurity and 22% reporting depressive symptoms. The review also highlights constructive hope and solution-oriented conversations as ways to help children cope with climate-related worries. It stresses the value of collective support, particularly through kin networks and the spirit of Ubuntu, which encourage families to share the burden. However, as these networks face growing pressures, strengthening them is essential to building family resilience.



Conceptual Framework of How Climate Stress Affects Family

Naming Eco-Anxiety in African Realities

Svetlana Onye of SustyVibes and The Eco-anxiety Africa Project described eco-anxiety as a range of emotions, from fear and helplessness to anger, grief and dread. She framed mental health as a climate justice issue, arguing that people should be able to adapt with dignity rather than simply endure. In African contexts, cascading climate impacts threaten identity and connection to place, while uncertainty and socio-economic pressures deepen distress. These burdens are not gender neutral. Women and girls often carry responsibility for water collection, food provision and emotional labour, while facing greater exposure to violence during displacement. Young people, meanwhile, may question their futures, education, and plans for family life. Evidence from a 2023 pilot study across five West African cities identified pollution, flooding and mudslides, heatwaves, unemployment, rapid urbanisation, and government inaction as factors that can worsen mental health. Community initiatives such as Intergenerational Bridges in Nigeria and ZenCafes create spaces for dialogue and shared learning. Through ZenGuardians, the train-the-trainer component of ZenCafes, twelve young people in South Africa, Uganda and Nigeria gained the skills to become climate leaders and host their own ZenCafe sessions in their communities. These initiatives support community-led climate conversations and help young people engage with climate-related concerns.



Climate Emotion Wheel

Decolonising Climate Resilience Through Mental Health Integration

Enock Mulwa drew on two Kenyan disasters to show why resilience must include well-being. In May 2024, flooding along the River Nyando affected communities across Kisumu County, damaging homes and disrupting livelihoods. The resulting displacement and loss of income affected children's access to health care and nutrition, their psychosocial well-being, and the stability of family life. The effects extended beyond the immediate damage, leaving families facing uncertainty and children struggling with disrupted routines and schooling. These impacts also build gradually, as seen in Garissa's pastoral communities, where drought unfolds across seasons, compounding losses and wearing down people's capacity to cope. If a house is rebuilt but a person still does not feel safe, connected, or able to function, recovery is not complete. Decolonising resilience means asking whose knowledge defines the problem and the solution and placing local and indigenous knowledge in dialogue with science rather than beneath it. In practice, this calls for a shift from working for communities to working with them, through a four-layer model of universal, community, targeted and clinical support; measures of functioning, connection, agency and equity alongside climate outcomes; ethical guardrails that avoid medicalising normal responses to crisis; and a twelve-month cycle of mapping, co-design, implementation and evaluation.



The Four-Layer Resilience Model

What This means for Decision Makers

The presentations showed that climate change is already shaping psychological health across entire lifespans, and that this burden is concentrated among children, women, older people and low-income communities. Brain and mental health should be built into climate adaptation, disaster preparedness and urban planning from the start, not added after a crisis. Clean energy, cleaner air, heat standards for homes, schools and workplaces, and green urban infrastructure protect brains as well as bodies. Protecting food, water security, livelihood and access to essential services can reduce the stress associated with climate-related disruptions, while psychosocial support helps families cope with the emotional and psychological impacts of disasters. Investment is needed in African-led, long-term research, particularly on slow-onset stresses such as drought, and in data systems that track brain and mental health outcomes. Above all, responses must be designed with communities, drawing on kin networks, youth leadership and local knowledge. This raises a fundamental question for policy: who defines resilience and recovery, and whose distress is counted?