OUR CLIMATE & OUR MENTAL HEALTH -
A CASE STUDY FROM KOTIDO DISTRICT, UGANDA

STRONGMINDS®

Introduction

Climate Change and Mental Health in Africa

Climate change is not only an environmental crisis—it is fueling a growing mental health emergency. As communities face escalating challenges due to rising temperatures and unpredictable weather patterns, the psychological toll is becoming increasingly evident. Emerging evidence demonstrates some of the effects climate change has on mental health. A 2021 study from the Grantham Institute found that exposure to climate change increases the risk of post-traumatic stress disorder, depression, low mood, and extreme stress[1]. Scientific research is also beginning to show how increased temperatures directly affect the human brain by increasing physical and psychological exhaustion[2]. However, these direct physiological changes are not the only way climate change contributes to mental distress.

Climate change and the extreme weather events it triggers create widespread disruption in people's lives. They can lead to income loss, reduced community resources, and forced migration, all of which disrupt social cohesion and can trigger depression and other mental health issues. The immediate results of these disasters and disruptions develop into a range of long-term consequences. For example, if children cannot eat, they cannot focus in school. If they cannot focus in school they are even more vulnerable to additional emotional triggers and possible traumas such as bullying or low self-esteem.

Evidence also suggests a strong correlation between rising temperatures and various forms of violence[3], which can exacerbate mental health issues. As environments change, essential resources such as water, food, and arable land become more scarce and competition for what is left intensifies[4]. Economic disruptions caused by climate change increase stress and can sow unrest[5].

Climate change has a particular impact on mental health in low- and middle-income countries (LMIC), where people are often more vulnerable due to limited resources, infrastructure, and access to healthcare. Communities across Africa are at high risk. A recent analysis estimated the burden due to climate change constitutes 34 percent of disability-adjusted life-years in sub-Saharan Africa[6].

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1. https://www.imperial.ac.uk/grantham/publications/all-publications/the-impact-of-climate-change-on-mental-health-and-emotional-wellbeing-current-evidence-and-implications-for-policy-and-practice.php

2. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10693336/#:~:text=(41)%20encompassing%20over%201.3%20million,in%20the%20occurrence%20of%20suicide

3. https://news.berkeley.edu/2013/08/01/climate-strongly-affects-human-conflict-and-violence-worldwide-says-study/

4. https://www.unep.org/news-and-stories/speech/climate-change-water-scarcity-and-security

5. https://www.unep.org/news-and-stories/speech/climate-change-water-scarcity-and-security

6. https://www.cambridge.org/core/journals/bjpsych-international/article/mental-health-and-climate-change-in-africa/65A414598BA1D620F4208A9177EED94B

More than 75 percent of people in LMIC lack access to mental health treatment[7], and in Africa specifically, there are only 1.4 mental health workers per 100,000 people[8]—a considerably low figure compared to the global average of nine workers per 100,000.

Given Africa's vulnerability to the severe consequences of climate change and its limited mental health workforce, the continent warrants special attention in research and policy discussions on the intersection of climate change and mental health.

The Purpose of This Report

Learnings and observations from StrongMinds' work illustrate the clear impact of climate change on mental health in the Kotido District of Uganda, a rural area in the country's northeastern region, known for a semi-arid climate, and reliance on pastoralism as a crucial means of survival. By documenting our findings and experiences providing depression treatment in Kotido, we intend to add to the growing body of evidence demonstrating that the psychological impacts of climate change extend beyond fear about the future—commonly referred to as climate anxiety—but are tangible and actively affecting people's daily lives. We also provide an example of how Interpersonal Group Therapy (IPT-G) deployed by trained lay community members can treat depression in areas with low access to mental health care and help communities and individuals adapt to climate change.
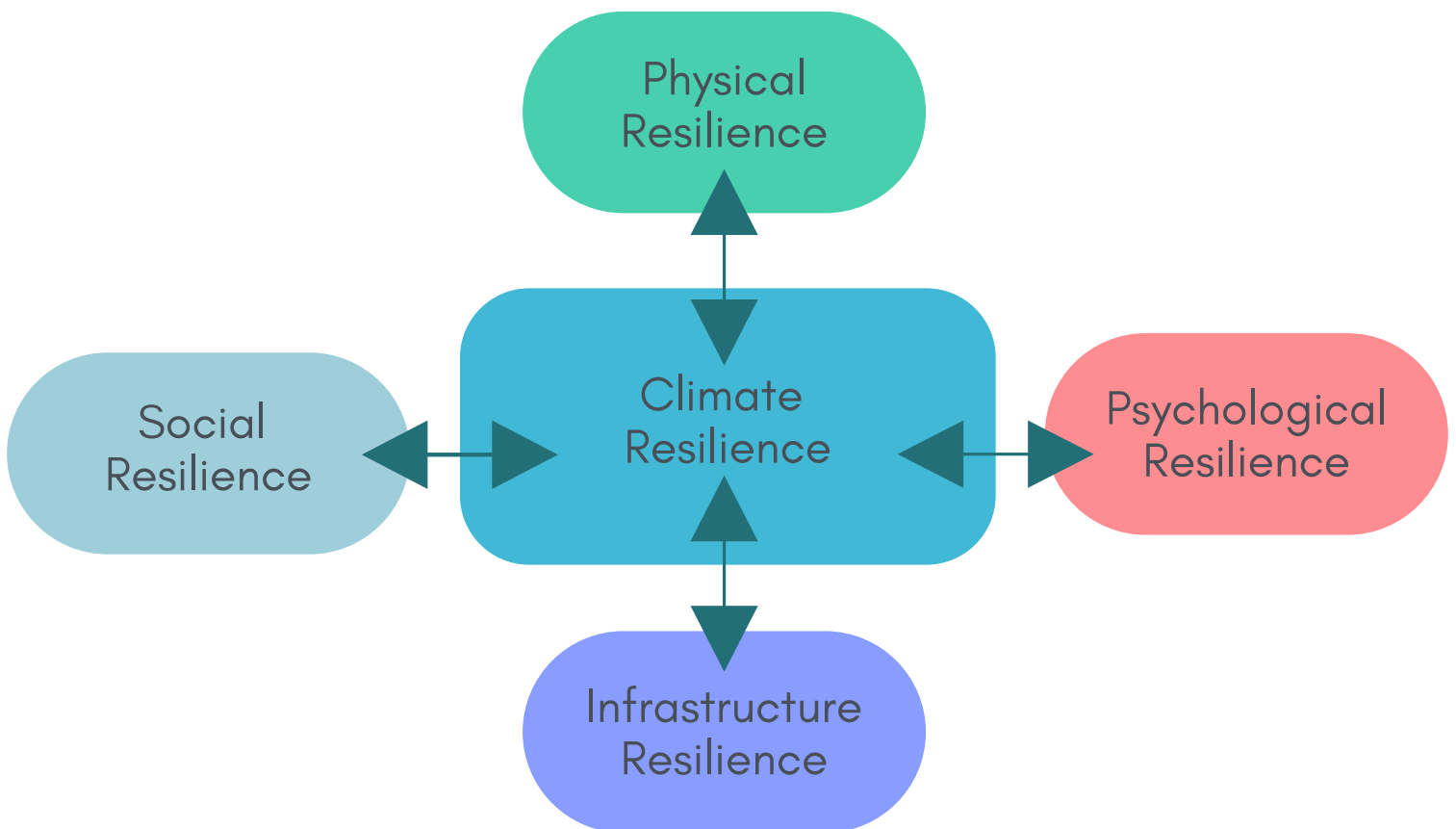

It is clear: increasing global temperatures have changed life in Kotido. Many times, these changes cause loss, strife, disruption, isolation, and grief, which are the known triggers of depression. Kotido is certainly not the only corner of the world experiencing the direct impacts of climate change; its experiences may serve as a sign of things to come for other communities within Africa and around the world. But, it is possible to adapt and build resilience. There are also clear steps that global leaders can take to equip vulnerable communities for a changing climate and a changing world.

7. https://www.who.int/news-room/fact-sheets/detail/depression

8. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9387063/

The Role of Resilience

As each culture, economy, community, family, and individual are different, the exact mental health implications of climate change can vary across the world and within countries. Psychological resilience, for example, can help determine how well and how quickly people adapt to the many transformations brought on by a changing climate[9]. Psychological resilience itself, however, has many determining factors, including levels of social support, access to resources, and a stable environment. By increasing levels of social support and material resources via social capital, the StrongMinds model of therapy builds psychological resilience, which is essential when coping with climate change.

Physical Resilience

Social Resilience — Climate Resilience — Psychological Resilience

Infrastructure Resilience

9. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7678676/

How StrongMinds Treats Depression in Communities Affected by Climate Change

Interpersonal Group Therapy (IPT-G)

StrongMinds treats depression using interpersonal group therapy (IPT-G), facilitated by lay community health workers. This manualized, time-bound talk therapy model emphasizes interpersonal relationships as the root of—and source of recovery for—depression.

Interpersonal psychotherapy was developed in the 1970s by Gerald Klerman and Myrna Weissman as a treatment for major depression. It is a time-limited depression treatment program that follows a structured curriculum.

IPT focuses on helping people understand the relationship between stressful events, interpersonal relationships, and their depression symptoms. Clients learn to manage their interpersonal encounters and take active steps to improve relationships and overcome challenges. They gain a sense of control over their lives, which counters helplessness and hopelessness.

These steps create positive life events that, in turn, relieve symptoms of depression and improve self-confidence.

Interpersonal Group Psychotherapy (IPT-G) adds a social element to this model. Therapy groups of approximately 12 individuals are led by lay health workers who guide structured discussions following the IPT-G curriculum. IPT-G is a highly scalable, cost-effective, and rigorously tested therapeutic model recommended by the WHO. Research has shown that IPT-G can be effectively delivered by lay providers[10].

The StrongMinds Model

The StrongMinds model uses a culturally adapted format of IPT-G delivered by lay counselors in communities and schools. IPT-G empowers people to improve relationships, develop communication skills, and foster lasting support systems. Groups usually meet once per week, for 60-90 minutes for six sessions. This time-limited approach encourages clients to stay focused on treatment and assume responsibility for addressing their challenges.

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10. https://emergency.unhcr.org/sites/default/files/Group%20Interpersonal%20Therapy%20%28IPT%29%20for%20Depression.pdf

The Triggers of Depression and How We Address Each

While individual triggers of depression can vary, the IPT-G framework cites—and addresses—four common triggers of depression: grief, disputes, life changes, and loneliness or social isolation.

Grief occurs after the death of a loved one or someone significant to the individual and can develop into depression. In group therapy, the facilitator and the rest of the group help the individual mourn their loss. They also aid in establishing additional relationships.

Disputes or conflicts can appear differently for different people but still cause inner emotional turmoil regardless of what they look like externally. Therapy allows people to determine the roots of their conflicts. Facilitators and participants help individuals develop new communication skills that can help resolve conflicts. Clients also learn to advocate for themselves in relationships.

Life changes such as childbirth, marriage, relocation, divorce, poverty, and illness are significant triggers for depression because they involve a disruption of established routines, roles, and relationships. These changes can lead to feelings of instability, uncertainty, and loss of control, which can cause emotional distress and depressive symptoms[11], even when the changes are positive. Group therapy helps individuals learn skills to manage these changes, find support, and find positive aspects of the change.

Loneliness, isolation, or emotional distance from others can trigger depression because they deprive individuals of the interactions that help them regulate their emotions. Group therapy helps people find out what is contributing to their loneliness and guides them to establish meaningful relationships.

Each of these triggers is likely to occur when climate change disrupts a community and its way of life. As communities face extreme weather events, conflicts can arise as resources become scarce, leading to disputes within families and communities, further exacerbating emotional distress. Conflicts and loss can lead to significant life changes, which can also lead to isolation.

StrongMinds' Results

Since its founding in 2013, StrongMinds has treated more than 710,000 individuals for depression, with 74 percent of clients becoming depression-free at the conclusion of therapy[12]. During these years, the majority of our efforts focused on women, who are disproportionately affected by

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11. Weissman, M. M., & Mootz, J. J. (Eds.). (2024). Interpersonal psychotherapy: A global reach. Oxford University Press.

12. StrongMinds uses the Patient Health Questionnaire (PHQ-9) tool to screen for the presence and severity of symptoms of depression. This 9-question tool is validated in many African countries.
"Depression-free" is defined as achieving minimal depression on the PHQ-9.

depression at nearly twice the rate than men[13]. For every woman we treat, four members of her family feel the benefits, and over the last 11 years, an additional 2.84 million indirect beneficiaries were positively impacted through the ripple effects of therapy.

Treating women leads to a wide range of broader spillover effects. After therapy, 16 percent of clients report regular engagement in work or economic activity, 30 percent report sending their children to school regularly, 13 percent report feeding their children regular meals, and 28 percent report feeling more socially connected. The far-reaching benefits of therapy can not only improve one person's well-being but also strengthen family units and communities as a whole.

In addition to our work with adults, we also treat adolescents, recognizing the unique mental health challenges they face and the potential for early intervention to create lasting positive outcomes. Depression affects 25 percent of adolescents in Africa[14], and while half of all mental health conditions start by 14 years of age[15], most cases are undetected and untreated. With 40 percent of Africa's population under the age of 15[16], we recognize the need to prioritize early intervention to have a protective effect. We have treated more than 85,000 adolescents and have 200 schools in Uganda and 17 schools in Zambia providing IPT-G to students.

The impact of these early interventions is undeniable. After completing therapy, 63 percent of girls saw improved grades and attended 4.6 more days of school, on average, over a 12-week term, 10 percent of girls who had previously dropped out of school re-enrolled, and 96 percent of adolescents reported feeling more hopeful about life.

Our approach to mental health care has transformed lives and positively influenced entire communities. The cascading effects of therapy underscore the critical importance of mental health interventions in vulnerable communities, especially in the face of an ever-changing climate, which compound on existing challenges such as displacement, food insecurity, and economic instability. By addressing mental health, we empower individuals and families to better cope with the multifaceted impacts of climate change, ultimately fostering resilience.

Our Work and Climate Change

StrongMinds has treated depression throughout Africa and in the eastern United States. Our programs are located in Uganda, Zambia, Kenya, Malawi, and Ethiopia, and we have pilot programs treating individuals in New Jersey, New York, and Connecticut in the United States.

13.   https://www.mayoclinic.org/diseases-conditions/depression/in-depth/depression/art-20047725
14.   https://ijmhs.biomedcentral.com/articles/10.1186/s13033-024-00642-w
15.   https://www.weforum.org/agenda/2018/10/half-of-all-mental-illness-begins-by-the-age-of-14/
16.   https://www.statista.com/statistics/1226211/population-of-africa-by-age-group/

Over more than a decade of work, we've witnessed numerous instances where climate change has impacted mental health. Climate change is increasing severe weather events across East and Southern Africa, with all of the countries in which StrongMinds operates facing significant challenges, particularly regarding agriculture, water and food scarcity, and overall economic development.

Recently, Zambia has faced a series of severe climate-related challenges, with devastating impacts on public health, education, and the economy. In late 2023 and early 2024, historic flooding triggered a massive cholera outbreak, leading to widespread school closures that affected millions of students. Infectious diseases, such as cholera, not only pose a direct threat to physical health but also have significant implications for mental well-being. Coping with the uncertainty associated with infectious diseases can lead to elevated stress, anxiety, and, in many cases, depression.

By mid-2024, Zambia then experienced severe droughts—which it is still in the midst of responding to—that have had a profound impact on the country's hydroelectric power generation, resulting in rolling blackouts and affecting millions of people's livelihoods. When people are faced with ongoing uncertainty regarding their basic needs—such as food, water, and electricity—the persistent stress can become unbearable. The instability in maintaining their livelihoods leaves many feeling powerless and emotionally depleted.

Areas of Uganda other than the Kotido District have also grappled with extreme weather events in recent years. In 2022, catastrophic flash floods in Mbale claimed more than 20 lives and caused extensive damage to homes and crops. "I felt like the whole world had crumbled around me," one StrongMinds client said. The same year, a hailstorm in Bugiri destroyed subsistence crops, devastating livelihoods and causing widespread food shortages.

Kenya is also not immune to the effects of climate-related disasters. In 2024, a cyclone caused extreme flooding in Nairobi and Mombasa counties, highlighting the vulnerability of urban areas as well as more rural and agricultural-based regions.

These extreme weather patterns are no longer isolated incidents. While Africa only accounts for 2 to 3 percent of global emissions[17], it remains disproportionately affected. Many of the communities in the countries in which StrongMinds operates lack the resources to mitigate the repercussions felt by climate change. The inherent vulnerability of these communities makes them susceptible to depression, and without the necessary mental health support, the cycle of trauma perpetuates, hindering their ability to adapt and thrive in an increasingly challenging environment.

17. https://www.unep.org/regions/africa/regional-initiatives/responding-climate-change

Kotido District, Uganda: Witness to a Changing Climate

Kotido District, located in northeastern Uganda, within the Karamoja sub-region, has an estimated population of over 200,000, predominantly made up of the Karamojong people, who are primarily agro-pastoral herders.

The district has a semi-arid climate, with a rainy season typically lasting from April to August, and a dry season extending from November to March. However, in recent years, the dry season has grown longer, posing increasing challenges for herders and their families. The majority of people in Kotido are involved in herding, making cattle central to individual, family, and community life. Cattle serve not only as a source of income but play a key role in the local culture.

Culture and Climate in Kotido

Certain cultural elements in Kotido allow for resilience to climate change. However, there are other cultural practices that exacerbate the challenges, especially for more vulnerable members of the population.

The communal lifestyle common in Kotido in which extended family members live together in one multi-generational homestead, or *Manata*, allows people to share their burdens with one another. This means one individual's problem frequently becomes a group problem where individuals offer each other assistance often in the form of sharing crops or food. Community elders also congregate regularly to discuss problems and develop community-level solutions.

The sense of community and personal mental health in Kotido may be strained during climate-related disasters like fires or droughts. However, the strong, existing community ties foster a greater collective efficacy—the shared belief that the community can confront challenges together. These networks also build social capital, providing tangible resources like food, which can be lifesaving in the aftermath of such disasters. As a result, both collective efficacy and social capital contribute to psychological resilience, an essential tool for overcoming the mental health challenges posed by climate change.

The mental health impacts of climate change are particularly severe for women in Kotido, where both environmental and societal factors compound their vulnerability. During prolonged dry seasons, women are often left to care for their families, shouldering additional burdens due to entrenched gender inequality.

Forced marriage, where daughters are exchanged for cattle, positions women as property. As climate conditions worsen, they are more likely to face spousal abuse, with extreme weather intensifying these risks.

The extended absence of men during these periods places further pressure on women, who are forced to earn an income, often through farming, to support their children. These challenges lead to overwhelming stress and, in many cases, depression.

Drought and food insecurity, exacerbated by rising temperatures, also contribute to increased alcohol consumption. In some cases, families drink alcohol as a substitute for food when there is none available.

Cattle, a symbol of personal value in the local culture, become targets for theft during raids, which frequently result in violence and death. These violent disruptions erode community safety, leaving families fractured and fostering feelings of isolation and hopelessness.

Availability of Mental Health Care in Kotido

Like many countries in sub-Saharan Africa, Uganda faces significant mental health challenges. Mental health conditions, such as depression, affect up to 35 percent of the population[18]. However, Uganda's mental health system is still underdeveloped and severely underfunded. There are only 53 psychiatrists in the country[19]—amounting to just one psychiatrist per one million people. The shortage of mental health professionals means that even when services are available, they are often overwhelmed by demand, leading to long wait times and limited to no follow-up care. The lack of infrastructure creates significant barriers to early intervention, preventing long-term mental care.

Most of the mental health workers and public mental health facilities the country does have are concentrated in urban areas, leaving rural communities, such as Kotido, with little or no access to care. With a staggering 83 percent of the population residing in rural environments[20], the need for effective mental health solutions is vital.

StrongMinds responds to this urgent need by providing scalable, community-based mental health care for populations that may otherwise have no access to treatment. Addressing the mental health needs of these rural communities is essential not only for individual well-being but also for fostering resilience and enhancing communities' ability to thrive in an ever-changing climate.

18.   https://www.frontiersin.org/journals/health-services/articles/10.3389/frhs.2023.1133770/full

19.   https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(22)00305-4/fulltext

20.   https://blogs.bmj.com/bmjgh/2023/10/22/the-silent-mental-health-crisis-among-men-in-uganda/

Climate Change and Hunger in Kotido

In 2023, nearly 282 million people around the world faced high levels of acute food insecurity, requiring urgent food and livelihood assistance[21]. In Africa, 140 million people face acute food insecurity, and at least one in five Africans goes to bed hungry[22]. Climate change is becoming an increasingly significant driver of food insecurity.

Research indicates that increased fluctuations in weather systems caused by climate change have led to extreme weather events like droughts and floods, which have negatively impacted crop yields across Africa. In Kotido, this has contributed to food insecurity and widespread malnutrition[23].

Extended dry seasons in the district, force cattle to graze over longer distances, placing them under greater stress, and increasing the risk of livestock loss. This not only jeopardizes the livelihoods of farmers but also threatens food security. Where farming does take place in Kotido, prolonged dry seasons can lead to decreased crop yields. Together, these factors can drive up food costs for families, making life even harder.

Windstorms during the increasingly extreme dry season aggravate wildfires, often initially caused by children left home alone while adults are out earning incomes or searching for food, individuals engaging in charcoal burning, and/or people clearing land in preparation for the cultivation season. Property and lives are lost to these fires leaving affected homesteads in shock, anger, and with little hope for the future. In 2012, six villages in Panyangara Subcounty (Nadome, Nadou, Lolito, Kangorok, Moruadang, and Lorwang) burned down, and in 2014 large farmlands in Kaicheri Subcounty were also destroyed. In March 2024, a fire destroyed 24 grass-thatched houses in Kotido Nakapelimoru Subcounty.

It is not only the dry season that has changed in Kotido. The rainy season has also gotten wetter. Destructive flooding in July and August often destroys staple crops like maize, millet, sorghum, and beans. Seasonal rivers created by the floods isolate some villages, limiting access to healthcare and instigating multiple mental health triggers. According to the last Kotido Hazard Risk and Vulnerability Profile created in 2014, three of the six sub-counties in Kotido district are at a substantial risk of flooding[24].

21. https://www.wfp.org/publications/global-report-food-crises-grfc

22. https://www.worldbank.org/en/news/immersive-story/2022/10/17/putting-africans-at-the-heart-of-food-security-and-climate-resilience

23. https://www.sciencedirect.com/science/article/abs/pii/S0277953621002859#:~:text=Foodpercent20insecuritypercent20waspercent20consistentlypercent20associated,morepercent20impactedpercent20bypercent20thepercent20relationship

24. https://www.undp.org/uganda/publications/karamoja-kotido-district-hazard-risk-and-vulnerability-profile

According to the Acute Food Insecurity Report of March–July of 2024[25], Karamoja is the most vulnerable region of the country to climate-related shocks and hazards which significantly contribute to persistent low levels of food and livestock production. The 2023/24 crop production season yields were below average due to a series of prolonged dry spells which reduced the availability of pastures for livestock and induced migration to the neighboring districts.

With food insecurity comes malnutrition. The Acute Food Insecurity Report also states that as of July 2024 over 112,000 children and nearly 9,000 pregnant or lactating women were at risk of acute malnutrition. In 2022 alone, out of the nine districts screened in Karamoja for malnutrition, Kotido ranked highest with acute malnutrition at a rate of 27 percent among children under five years old[26].

Food insecurity brought about by climate change also forces vulnerable households to make desperate decisions. Rates of child marriage increase during and after climate-related disasters such as prolonged droughts[27]. Many young brides are at high risk of gender-based violence and endure emotional, physical, and sexual abuse from their older husbands. Out of fear of disappointing their parents, they are often silent about the abuse they experience. From January to June 2024, 93 percent of gender-based violence cases reported at Kotido Central Police Station involved female victims, with 16 percent of these cases linked to forced marriages.

Cattle Raids and Conflict

With increased temperatures, cattle are lost throughout Eastern Africa to disease and cattle raids, increasing stress on herders and their families. Though cattle raids have been a part of pastoral life in East Africa, climate change, regional instability, and the small arms trade have resulted in deadlier and more frequent attacks[28].

The International Crisis Group noted that a prolonged drought in the Horn of Africa resulted in increased raids and violence in Kenya, stating, "The increase in violence shows how climate shocks such as droughts can magnify local tensions or conflict, particularly harming those who earn an income through agriculture. Droughts and floods also accelerate environmental degradation, which in turn intensifies disputes over land and water.[29]"

25. https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1157053/?iso3=UGA

26. https://www.unicef.org/documents/uganda-response-report-karamoja-july-2022

27. https://esaro.unfpa.org/sites/default/files/pub-pdf/child_marriage_and_environmental_crises_an_evidence_brief_final.pdf

28. https://www.healthnettpo.org/en/news/understanding-south-sudan-cattle-raiding

29. https://www.crisisgroup.org/africa/east-and-southern-africa/kenya/b189-absorbing-climate-shocks-and-easing-conflict-kenyas-rift#:~:text=With%20climate%20change%2C%20more%20and,44

As we have seen in our work in the area, cattle raids also affect life in Kotido. In just the first quarter of 2024, 68 percent of households in Kotido lost cattle to raids and livestock diseases[30].

In Kotido and the larger region, men's social status is derived from the number of cattle he has, as are his marriage prospects. When herders sustain cattle losses due to disease and raids, they can experience depression and suicidal thoughts, resort to heavy drinking, and sometimes engage in cattle raids out of a desire for revenge. Due to the importance of cattle in the economic and social status of men in Kotido, loss of cattle can be devastating for mental well-being and lead to a vicious cycle of depression and violence.

The Toll of Cattle Raids

Climate change continues exacerbating hardships for communities that rely on pastoralism, like in Kotido, where cattle are not just a source of food, but the cornerstone of economic stability. The theft of livestock can have devastating consequences such as income loss, financial instability, food insecurity, decreased social standing in the community, and even death.

With shifting environmental patterns and increasing economic desperation, cattle raids are frequent, and for many StrongMinds clients, this can trigger depression.

Cattle raids often peak in the dry season and for Mukisa, a 31-year-old man in Kotido, this was when he lost his only cattle to the Dodoth warriors from the Kaabong district. The loss of his 12 cows devastated him, stripping him of both his livelihood and his sense of self-worth. Overwhelmed by feelings of hopelessness and worthlessness, he lost his appetite and struggled with insomnia. He also turned to alcohol as a way to cope, causing him to further spiral into depression. Without his cattle, Mukisa could not provide for his family and his wife and three children eventually left him, leaving him feeling abandoned and contemplating suicide as his only escape.

30.   https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1157053/?iso3=UGA

A facilitator working with StrongMinds befriended Mukisa and convinced him to join a therapy group, where he felt supported and made friends. The group encouraged him to avoid being alone and suggested business ideas to help him get back on his feet. After joining local youth groups, Mukisa stopped drinking alcohol and started a business of buying and selling sorghum. These days, when negative thoughts of despair return, he turns to prayer. "Had it not been for StrongMinds, I would have been dead," he shared. Mukisa married again, and together they have a thriving business.

Mukisa is not the only person in Kotido whose livelihood was jeopardized by cattle theft. Kaikara, a 37-year-old man, also had his cattle stolen at the hands of the Matheniko and Turkana warriors. However, instead of feeling overwhelmed by helplessness, Kaikara was filled with rage. Driven by desperation to provide for his wife and children, he felt he had no choice but to seek revenge through cattle raids of his own, believing it was the only way to restore his lost livelihood.


In an effort to reduce violence, the Ugandan army has turned to informer-led disarmament campaigns, and through word of mouth, Kaikara heard he was one of their wanted warriors. Out of fear of being caught, he spent three years hiding in the bush with limited contact with his family and friends. When he did step foot in the community, authorities were alerted, and this constant state of panic and distress took an extreme toll on his mental health.

"I was a prisoner in my own home," Kaikara shared. He learned about StrongMinds therapy groups from fellow warriors, decided to get screened, and began attending sessions. During therapy, he was encouraged to hand over his gun to the security office and put an end to his life on the run. With the support of his wife, Kaikara made the difficult decision to trade his weapon for his freedom. Had Kaikara not joined a StrongMinds therapy group, he never would have found the courage to face authorities, reclaim his freedom, and begin rebuilding his life.

The experiences of Mukisa and Kaikara highlight the profound mental health challenges that climate-induced hardships can create, especially in pastoralist communities. As climate conditions worsen, desperation could lead to escalating violence and lost livelihoods. Through therapy, StrongMinds is helping individuals and communities recover from the economic and psychological impacts of climate-related events. Mukisa and Kaikara's stories serve as a reminder that even in the darkest of times, there is always the potential for recovery and new beginnings.

The Prevalence of Depression in Kotido

StrongMinds treated 29,246 people in Kotido between 2022 and 2024. The PHQ-9 scores taken before therapy (the PHQ-9 is a tool used to screen for and diagnose depression) increased steadily during that time. Given that this increase in depression severity occurs at the same time as severe weather events such as droughts, floods, and fires reportedly increased in the area, it is possible that the increase in depression is a result of climate change-induced weather events.

PHQ-9 Scores at Baseline in Kotido

Depression Severity

Year
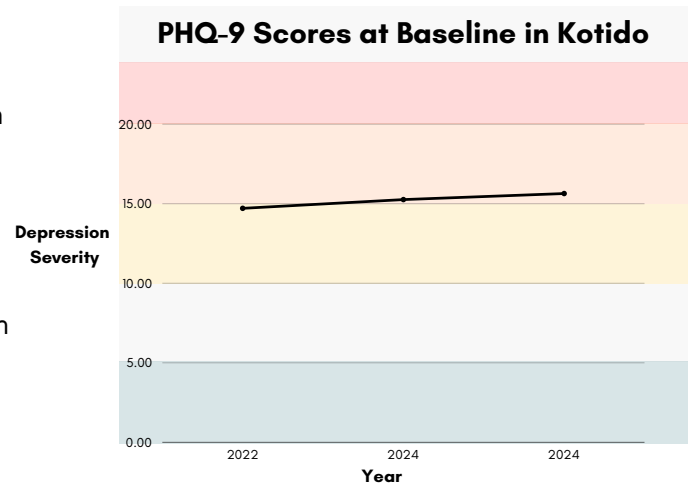
Increase in baseline score is considered statistically significant.

How Climate Change Connects to Mental Health in Kotido

Climate change impacts all aspects of life in Kotido—extreme weather like fires and flooding leads to food insecurity and conflict within families and across communities. Loss of livestock compromises an important food source and negatively affects men's self-esteem and mental well-being because of cultural associations with male strength. This physical and mental stress can lead to depression and hopelessness among Kotido's residents, which further impacts their ability to adapt and respond to these ongoing challenges, leaving many trapped in a cycle of food insecurity and depression. Climate change contributes to all four of the depression triggers StrongMinds screens clients for:

Grief: Due to food insecurity, men resort to stealing cattle from neighboring communities to provide for their families. Cattle raids can result in violence and death, with parents losing their sons, wives being widowed, and children becoming orphans. Most of these clients face challenges with adapting to the loss and adjusting to the new normal.

Disputes or conflict: Misunderstandings between and within households are common, due to the competition for limited fertile lands for cultivation. Families also struggle over the use of limited oxen to plow their gardens. Clients become depressed because of the different expectations and needs they have for each other and communication between the parties becomes difficult. Increased stress and alcohol abuse leads to higher levels of gender-based violence. All of these circumstances damage a person's agency, sense of safety, and routines.

Life-changes: Because of the changing climate, households are unable to harvest enough food. Families are also displaced and properties are destroyed due to wildfires, causing upheaval and uncertainty. Pressure on families in many cases induces parents to marry off their daughters in exchange for food or cattle. Malnutrition in children often means doctors visits and associated expenses, which can further upend life. Many times, children are forced to earn incomes to help contribute. All of these transitions are difficult for each member of a family.

Loneliness, isolation, or emotional distance from others: Social isolation affects everyone in Kotido. It affects men when they lose cattle and are mired in conflict. It affects women when they are left to care for their children alone during the longer dry season. Both have lower self-esteem. When men die and there are no cattle, cultural customs prohibit gatherings to mourn where there are no animal slaughters. The stigma of mental illness compounds all of this isolation, with people being afraid to discuss their symptoms.

The Cascading Effects of Drought in Zambia

Zambia is facing the worst drought in decades, causing widespread crop failures and crippling the country's infrastructure that relies on hydroelectric power, leaving many people facing starvation and hunger as well as severe economic hardship, as farmers and agricultural businesses lose significant income and profits.

95% of the country's power comes from hydroelectricity leading to prolonged blackouts that frequently last 17 hours a day, exacerbating the challenges faced by an already struggling economy and infrastructure damaged by severe flooding that led to the worst cholera outbreak in decades less than a year ago.

Without electricity, essential services such as hospitals and food shops are at risk and water pumps stop working, leaving people with limited access to water and basic sanitation. ATMs and traffic lights go offline, businesses struggle to operate in the dark, and precious food storages spoil as refrigerators become unusable after extended daily power outages.

The cascading effects of these environmental and economic crises can have a profound impact on mental health, triggering widespread depression. When people are faced with constant uncertainty about their basic needs—such as food, water, and electricity—the chronic stress can become overwhelming. The strain on livelihoods, coupled with the inability to plan for the future, leaves many feeling powerless and emotionally depleted.

Lirato's Story: Navigating Adolescence Amidst a Climate Crisis

For Lirato, a 14-year-old girl in the Ngombe community of Lusaka, the drought has affected every facet of her life. Her parents' once thriving farm is now littered with brittle stalks of dead crops and the well near their home no longer fulfills their daily needs. Lirato's family lost not only their harvest but also their only source of income as her father's workplace temporarily closed months ago due to a lack of electricity. It has yet to reopen. After months of no income, no crops, and rising food and water prices, Lirato's family faces food scarcity every day and they now mostly live on watery porridge.

Without electricity, Lirato can no longer study and her school performance has suffered, along with her concentration—with water in such short supply baths are limited and she says her skin feels constantly itchy, dry, and dirty. She shares that her dreams of graduating have begun to fade.

When the compounding stressors of the drought left Lirato feeling hopeless and disconnected from the world, she joined a StrongMinds therapy group in her school to address her depressive symptoms. Through therapy, she found comfort in connecting with other students who faced similar challenges in the wake of the drought. She learned valuable skills to cope with the sudden change in her life and worked to normalize her feelings. While the drought continues, Lirato is working to adapt to her circumstances and move her life forward despite her challenges.

Peter's Story: Battling Depression in the Wake of Economic Uncertainty

Peter, a young man living in Lusaka, lost his job due to the frequent power cuts. Without a steady paycheck, Peter struggled to support his family, causing him to spiral into depression. Therapy offers individuals like Peter the crucial community support they need to feel less isolated and empowered to find ways to survive in the face of adversity.

The devastating impact of the drought highlights the broader climate crisis facing millions of people globally. Therapy and community support play a vital role in helping people build resilience to climate-related issues and catastrophes, providing them with the tools and emotional strength needed to navigate and overcome these unprecedented challenges.

Our Work in Kotido

Overview

The StrongMinds program in Uganda treats depression in adult men and women as well as in adolescents, including in-school adolescents and out-of-school adolescents. In Kotido District, we are currently operating in six sub-counties (Napumpum, Kotido West Division, Kamoru, Longaroe, Rengen, and Maaru) and five schools (Kotido SSS, Mary Mother of God P/S, Lopuyo P/S, Rengen P/S, Napumpum P/S). Therapy is provided by community facilitators, including former clients, Ministry of Health Village Health Team members, teacher facilitators, and respected community leaders. Each year, between 5,000 and 9,000 clients receive treatment, with a total of 29,246 individuals treated since 2022. Through this program, we've seen clients develop stronger coping mechanisms for daily stressors, such as sharing food during times of scarcity and offering free labor to one another during cultivation seasons. Notably, more men are now participating in therapy, and in 2023, five men voluntarily surrendered their firearms to authorities after receiving therapeutic support. Firearms are implicated in violence, injury, and death in cattle raids.

Developing Psychological Resilience:

When treating clients for depression in Kotido and elsewhere, StrongMinds develops the following dimensions of psychological resilience:

Interpersonal Communication Skills:

By encouraging clients to reflect on their communication patterns, we help them identify potential conflict triggers. We also help clients develop their feelings of self-worth and to develop assertive communication techniques. Our experience in Kotido has been that these skills help family members understand, manage, and help match one another's expectations.

Personal Agency:

During group therapy, facilitators and other group members reinforce a person's sense of agency, or their ability to control their life and make decisions. In Kotido, this has helped men realize they can reduce violence. Many have responded by abandoning their firearms.

Collective Problem-Solving and Building Social Support Mechanisms:

Through group therapy, clients develop solutions collectively. By fostering better interpersonal connections and understanding, the StrongMinds model helps individuals resolve conflicts collaboratively, which can alleviate individual pressure and depressive symptoms. Collective problem-solving strengthens the collective efficacy of communities in Kotido and often results in social capital that can result in tangible resources such as food rations for hungry households. Individuals also help one another bury loved ones or care for crops after bonding in group sessions.

Collective Accountability:

Clients in Kotido and elsewhere are assigned homework after sessions, helping them devise solutions to their problems. Clients are also given goals which are evaluated by the group. In Kotido, we know of clients encouraging and checking on each other and their goals when they meet in their communities between sessions. Striving for and ultimately meeting goals can help build psychological resilience that can make it less likely for a client to relapse into depression.

Self-Care:

Clients learn coping mechanisms to deal with triggers to avoid depression relapses. Facilitators and group members help clients identify stressors and potential burnout so that individuals can take proactive steps to enhance their well-being. In Kotido, we have seen a range of self-care activities after treatment cycles—from increased medical appointments to expressive art and dance to improved hygiene.

Call to Action

As climate change continues to reshape environments and livelihoods in communities like Kotido, its impact on mental health becomes an increasingly urgent matter. The psychological toll of climate-induced stressors—such as displacement, loss of income, food insecurity, or water scarcity—exacerbates existing mental health conditions and leaves communities even more vulnerable to depression.

Providing mental health support is not just a matter of alleviating immediate suffering, but a key component in developing psychological resilience and the ability to adapt in the face of continuing environmental change. When mental health needs are addressed, people can better cope with the disruptions caused by climate change. Improved mental well-being directly correlates to higher productivity, greater participation in economic activity, and enhanced financial stability within households, which in turn boosts local economies and strengthens resilience. Our research shows that 16 percent of our clients report they can engage in more income-generating activities after completing therapy, and 28 percent report feeling socially connected. In areas such as Kotido, a community-focused environment, this social connectedness helps individuals share resources and provide emotional encouragement, which are essential to building resilience to climate-related stressors.

To fully address the intersectional issue of climate change and mental health, there must be a global commitment to continue the discussion and to invest in solutions. We must continue to promote mental health resilience as a vital tool for climate adaptation. Mental health should be a key topic at climate conferences, and climate change must also be integrated into discussions at mental health conferences. By bridging these conversations, we can ensure that policymakers, researchers, and practitioners from both fields work together to create comprehensive solutions.

To build a stronger case for integrating mental health programs into climate strategies, more research and data are urgently needed to understand the connection between mental health and climate-related events. We've seen first-hand how the onset of mental health conditions, such as depression, can occur in the wake of climate disasters—such as the persistent droughts in Zambia or the unprecedented hailstorms that destroyed crops in Uganda.

After therapy, clients who experienced these events were better able to cope with the fallout and were equipped with the tools they needed to better withstand similar events in the future. While our work in Kotido and across Africa is a critical example, further studies are needed across diverse regions to understand the full impact of these environmental stressors. These findings can inform the development of tailored interventions to foster long-term resilience and strengthen communities' ability to adapt in the face of a changing climate.

But as it stands, the need for mental health treatment—whether it be climate-related or not—greatly surpasses available care. The treatment gap is vast—mental health funding accounts for under one percent of LMIC health budgets and just 0.3 percent of global development aid for mental health. This disparity highlights critical underinvestment in mental health care, especially in regions that are most susceptible to the cascading effects of climate change, such as Africa.

StrongMinds is committed to providing depression treatment to vulnerable communities so they possess the tools necessary for a changing environment. We call on governments, policymakers, and donors to prioritize mental health as part of the global climate change response. By integrating mental health care into climate action plans, we can build stronger, more resilient communities that are better equipped to face the challenges ahead.

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