“Everyone is Fighting Their Own Battles”: A Qualitative Study to Explore the Context of Suicidal Ideation Among People Living with HIV in Kilimanjaro, Tanzania

by

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Date: March 22, 2024

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Thesis submitted in partial fulfillment of the requirements for the degree of Master of Science
in the Duke Global Health Institute in the Graduate School of
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ABSTRACT

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Abstract

Background: In 2020, Tanzania struggled with significant HIV-related challenges, including 1.4 million people living with HIV (PLWH), 33,000 new infections, and 22,000 AIDS-related deaths. Suicide emerged as a main cause of mortality among PLWH, accounting for over a quarter of all suicides. Despite these alarming statistics, mental health resources remained scarce, with only 55 psychologists and psychiatrists in the country. Clinic staff in HIV care were tasked with providing counseling despite limited mental health training, primarily focusing on HIV education. This study aimed to delve into the lived experiences of PLWH with recent suicidal ideation to inform tailored mental health interventions.

Methods: Participants were screened for suicidal ideation during routine HIV clinic visits, with qualitative interviews conducted thereafter. Data was analyzed using thematic analysis facilitated by NVivo 12 software.

Results: PLWH experiencing suicidal ideation encounter significant mental health challenges originating from factors such as their HIV diagnosis, societal stigma, financial stress, and broader social determinants. Death is sometimes perceived as an escape from the challenges associated with HIV. Coping mechanisms include seeking assistance from religious leaders. While participants expressed openness to counseling, limited treatment options hinder access.

Conclusion: Suicide is an urgent public health challenge among PLWH in Tanzania, exacerbated by unique stressors like socioeconomic challenges, stigma, discrimination, and psychological distress. Despite the seriousness of these challenges, options for mental health treatment are scarce and not tailored to the needs of PLWH. Our findings can inform the improvement of mental health care for PLWH in Tanzania and other low-resource settings.

Key Words: Tanzania, HIV, Suicide, Suicidal ideation, Mental health, lived experience, Qualitative research, Stigma, Coping mechanisms, Counseling intervention, Socioeconomic challenges, Discrimination, Psychological distress, Treatment options and Low-resource settings.

Dedication

I dedicate this work to all the participants who bravely shared their experiences with me during the interviews. Discussing emotions tied to suicidal thoughts is profoundly challenging, yet you approached our conversations with openness and trust. My deepest gratitude to you all. Additionally, I extend my dedication to the IDEAS for Hope study team in Tanzania. Your unwavering support has been invaluable.

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1. Introduction

Suicide is a leading cause of death among people living with HIV (PLWH) globally (Dema et al., 2019; Wang, et al., 2018). Over 700,000 individuals die by suicide annually, with a higher prevalence in low- and middle-income countries (World Health Organization, 2019). Each year, close to 34,000 suicides occur in Africa (Mars, et al., 2014). In Tanzania, more than one-quarter of all suicides are reported among PLWH (Ndosi et al., 2004). The WHO documented a suicide rate of 9.3 per 100,000 people in Tanzania in 2019 (WHO, 2019). When considering global trends, more than 700,000 die by suicide each year, representing an annual global age-standardized suicide rate of 9.0 per 100,000 population (WHO, 2019). Furthermore, more than 80% of suicides worldwide occur in low and middle-income countries, according to the WHO Mortality Database. (WHO,2003).

The mental health care infrastructure in Tanzania is marked by a noticeable shortage of trained mental health professionals and limited access to facilities, highlighting a growing public health dilemma (Knettel et al., 2020; Tran et al., 2019). The scarcity of services is stark. Tanzania has only 55 psychiatrists and psychologists in a nation of more than 63 million people, which is a clear gap between the demand for mental health services and the available care (Knettel et al., 2023 & Mental Health Atlas, 2014). In Moshi, Tanzania, counseling services are mostly provided by general healthcare providers who may lack specialized training in mental health (Knettel et al., 2023). Non-governmental organizations (NGOs) also provide psychosocial support, but these services are not widely available. The availability of mental health medications is limited, and medications are not affordable for most people (Saxena et al., 2007). Further, existing services may be ineffective in addressing suicidal ideation because of a lack of understanding of suicidal ideation and its contributing factors in this population, such as social

isolation, poverty, and discrimination (Iseselo & Ambikile, 2017). It is important to recognize the factors that contribute to suicidal ideation among People Living with HIV (PLWH), such as social isolation, poverty, and discrimination (Vance et al., 2008), while also acknowledging that these factors may manifest differently in Tanzania compared to more extensively studied regions like the US or Western countries. These differences could affect how suicidal thoughts develop and worsen among PLWH in Tanzania, possibly leading to suicide attempts or deaths by suicide.

Suicidal behavior is both illegal and also deeply stigmatized in Tanzania; therefore, many incidents might go unreported, thereby skewing the actual numbers (Minja et al., 2023). The social, cultural, and legal environment of silence around suicide deaths creates barriers for individuals and families who might hesitate to disclose or discuss suicide-related incidents (Fitzgerald & Bayne, 2015). Tanzanians living with HIV face other challenges, related to stigmatization (Knettel et al., 2020). As a result, HIV is frequently associated with depression and anxiety, which can be attributed to a mix of biological factors, emotional distress, stigma, and broader social challenges (Ophinni et al., 2020, Ngocho et al., 2019 & Madundo et al.,2023). The onset of the COVID-19 pandemic has further complicated the landscape, with early evidence suggesting a rise in suicide rates during this period (Li et al., 2020).

Socioeconomic factors further intensify the mental health crisis in Tanzania among PLWH. About 26.4% of Tanzanians live below the world poverty threshold (World Bank, 2020), and the nation grapples with unemployment rates as high as 9.7%, pushing many into informal sectors without job security (Bolton, 2016). HIV stigma and other challenges unique to PLWH may further contribute to socioeconomic difficulties in this population (Li et al., 2018). These economic struggles, combined with challenges like limited healthcare access, contribute to the elevated stress and risk of suicidal ideation among PLHIV (Tomori et al., 2014). Misconceptions around HIV also fuel discrimination, leading to isolation, loss of support, and heightened feelings of shame (Knettel et al., 2020; Nyblade et al., 2009). Together, shared risk factors and social

determinants of poor health combine to create a complex pattern of closely interrelated challenges that are difficult to sort out and address.

The main objective of this study is derived from the overarching goals of an ongoing intervention development study, as outlined by Knettel et al. (2023). The parent study aims to develop a sustainable, culturally sensitive, and effective mental health intervention targeting the reduction of suicidal ideation among people living with HIV (PLWH) in Moshi, Tanzania. To contribute to intervention development, we sought to obtain a comprehensive understanding of the factors contributing to suicidal ideation, barriers to care, and potential solutions through the following study aims.

Research Aims

1. To explore and comprehend the lived experiences of people living with HIV (PLWH) who have reported recent suicidal ideation, shedding light on the intricate aspects of their mental health challenges.

2. To gain insights that can inform future interventions and treatment strategies, which will enhance mental health services specifically tailored for this critically underserved and stigmatized population.

2. Methods

2.1 Study Design

We conducted semi-structured in-depth interviews with 15 PLWH in Moshi, Tanzania who were experiencing suicidal ideation from January 2022 to December 2022. People living with HIV (PLWH) were assessed for suicidal ideation during their routine HIV care appointments at two adult HIV Care and Treatment Centers (CTCs) in Tanzania.

2.2 Setting

This study was conducted at two adult HIV Care and Treatment Centers (CTCs) in Moshi, Tanzania: Kilimanjaro Christian Medical Center (KCMC) and Pasua Health Center. The choice of these centers was deliberate, considering their significance in providing adult HIV care services in the region (Minja et al., 2023). KCMC, a larger facility, attends to a substantial patient load of 900 to 1200 individuals monthly for regular HIV care appointments. In contrast, Pasua Health Center, with an approximate monthly service to 200 patients, represents a smaller-scale facility. Notably, the structure of HIV care in Tanzania involves providing free services to all individuals attending government hospitals (USAID, 2020). The selection of both clinics aimed to capture a diverse range of experiences within the HIV care landscape in Moshi. KCMC, being a larger facility with a substantial patient load, represents a more robust economic setting, while Pasua Health Center, catering to fewer patients, reflects a mid-level economic context among the study participants.

2.3 Participants

Fifteen participants were randomly selected to complete in-depth qualitative interviews, 9 from KCMC and 6 from Pasua. out of a sample of 80 participants enrolled in a larger study focused on the validation of measures of suicide risk among adults living with HIV in Tanzania (Minja et al., 2023& Knettel et al., 2023). All participants from the larger validation study were

adults living with HIV who were screened for suicidal ideation during routine HIV care appointments and reported experiencing suicidal ideation in the past 30 days. A total of 3885 PLWH were screened for eligibility. Participants were required to be 18 years or older and attending either the Pasua or KCMC clinic for HIV care. Additionally, they needed to be physically and cognitively capable of providing informed consent and completing the study procedures.

2.4 Procedures

Before the beginning of the parent study, The CTC nurses at the two study sites received specific training on how to screen for suicidal ideation. At the beginning of the study, nurses screened all of their adult patients for suicidal ideation during routine HIV care appointments using a single yes/no question derived from the Columbia Suicide Severity Rating Scale (Giddens et al., 2014). Translated into Kiswahili: "In the last month, have you had actual thoughts of killing yourself?". A total of 3885 participants were screened; 80 (2.1%) of them screened yes for suicidal ideation and enrolled in the larger study. Out of 80 participants, we identified 15 participants for this qualitative sub-study by choosing every 4th participant. Fifteen eligible participants were informed of the research and accompanied to a private room to meet with a Bachelor's trained research assistant, who had prior training and extensive experience in qualitative research. The research assistant read the informed consent aloud, obtained written informed consent, and conducted a semi-structured qualitative interview in Kiswahili. We determined data saturation with 15 participants when repetitive themes emerged, and no new information surfaced despite further recruitment efforts, indicating thorough exploration and adequate representation of the study population.

Our interview guide was carefully created to explore deeply the various experiences and challenges faced by individuals living with HIV. It was designed to cover a range of topics, including emotional well-being, medication adherence, stigma, and suicidal ideation, ensuring a

comprehensive understanding of their situation. Each question was carefully structured to capture detailed responses, helping us understand specific aspects and encouraging open conversation with participants. By including probing questions, we aimed to capture the rich complexity of their experiences and emerging themes that arose during the interviews, which can greatly influence the effectiveness of our intervention strategies. For additional details see Appendix A: Summary of Interview Guide.

Furthermore, the IDEAS for Hope intervention, which we are preparing to implement, is rooted in the principles of motivational interviewing-enhanced safety planning and problem-solving therapy to address social determinants and stigma reduction interventions (MI-Safe Cope). This evidence-based intervention, as outlined in the work by (Czyz et al., 2019). combines motivational interviewing techniques with safety planning protocols to provide tailored support for individuals struggling with suicidal ideation in the context of living with HIV (Czyz et al., 2019). It empowers participants to identify their strengths, coping mechanisms, and support networks while collaboratively developing strategies to navigate challenges and enhance their sense of hope and resilience.

By integrating these evidence-based approaches into our intervention framework, we aim to address the complex interaction of emotional distress and HIV-related challenges comprehensively. We aspire to foster positive outcomes in participants' mental health and well-being through personalized support and empowerment, ultimately contributing to their overall quality of life.

All interviews were audio-recorded and audio files were transferred to a secure electronic database. After the interview, all participants received compensation of 10,000 Tanzanian shillings (approximately 4.50 USD) for their time.

After completing the interview, all participants received a brief safety planning intervention using the procedures outlined by Stanley and Brown (2012),. as well as referral

information for normal standard-of-care counseling services. Participants with an active plan or intent to attempt suicide were linked directly to a mental health worker at the hospital.

2.4.1 Ethical review

All study procedures received approval from the Tanzanian National Institute of Medical Research and the ethical review boards of the Duke University Health System and Kilimanjaro Cristian Medical Center (KCMC). All participants provided written informed consent before they agreed to participate in this study, including explicit consent to have the interviews recorded.

2.5 Analysis

Audio recordings of in-depth interviews were transcribed and translated to English by a bilingual team member (I.A & C.T). Thematic analysis of the transcribed data followed Braun and Clarke's (2006). six steps: (1) Familiarization of data, (2) Generation of codes, (3) Combining codes into themes, (4) Reviewing themes, (5) Determining the significance of themes, and (6) Reporting of findings. Notably, all data underwent coding utilizing NVivo 12 software (QSR International Pty Ltd., 2018), and for quality assurance, four interview transcripts (27%) were randomly double-coded by a second evaluator and assessed for inter-coder agreement with a predetermined benchmark of 80% agreement. This process ensured satisfactory coding quality, enhancing systematicity, communicative aspects, and transparency (O'Connor & Joffe, 2020). Interrater reliability for the selected interviews was calculated above the acceptable benchmark, with a range of 82.4-86.3% agreement. The final analysis and theme development involved group discussion, the creation of analytic memos through thematic coding, content combination, interpretation, and participant characteristics comparison.

3. Results

3.1 Results

Table 1. Demographic information of study participants sample 15

Age	N (%)
• 18-28	3(20)
• 29-39	3(20)
• 40-50	8(53.33)
• 51 and over	1(6.67)
Gender	
• Male	2(13.13)
• Female	13(86.67)
Education	
• Grade 7 or above	12(80)
• Less than Grade 7	3(20)
Relationship Status	
• Married	5(33.33)
• In a relationship	1(6.67)
• Single	2(13.33)
• Divorced	4(26.67)
• Widowed	3(20)

Among these participants, 14 were diagnosed with HIV later in life, while 1 participant was born with HIV. It's noteworthy that among these participants, only 1 did not adhere to medication. This participant started using medicine the day before enrollment, despite being diagnosed more than 10 years prior. Additionally, it's worth noting that the demographic composition of these 15 participants appears to be consistent with the larger sample of 80 individuals (see Appendix A). With a median age of 42 in the larger sample, most participants

had completed standard 7 or above, and a significant portion were either married or cohabited. This suggests a similarity in educational and marital status distributions between the subset of 15 individuals interviewed and the overall sample.

In our exploration of the intersection between the HIV journey, mental health challenges, and suicidal ideation, we have identified several key themes that underpin our understanding of these complex issues. These include social determinants, coping strategies, and beliefs about the effectiveness of mental health treatment.

Table 2 below provides a comprehensive overview of these themes, elucidating their interconnectedness and the driving factors behind each.

Table 2. Themes related to suicidal ideation among people living with HIV in Kilimanjaro, Tanzania

Themes		
Main Themes	Sub-Themes	Representative Quotes
HIV journey	*-HIV testing and diagnosis* -HIV stigma -Medication adherence	*"Hmm, I felt incredibly distressed because I wasn't anticipating receiving such news, especially considering where I was in life at that moment. It hit me hard."*
Suicidal ideation and drivers of mental health challenges	*-Suicide attempt* -HIV Infection and associated health challenges -Family conflicts, isolation, and stigma	*"I swallowed all the pills with a glass of water, but I didn't feel any different until my neighbor returned and asked what I was doing. I confessed how angry my husband had made me. All she found were the empty blister packs, so she hurried to the shop and brought back some milk."*
Social determinants of suicidal ideation	*-Financial stress* -Challenges with housing -Food insecurity	*"Without health insurance, I am left untreated and financially burdened when illness strikes, making me feel hopeless about my future."*
Mental health treatment and coping skills.	*-Religious coping* -Family &friends -HIV clinic staff -Financial support &work opportunity	*"I don't know, I just heard a voice in my soul telling me not to kill myself, to stay there, and to pray to God to help me."*
Feedback on IDEAS for Hope Counseling Intervention	*-Suggestions for intervention content* *-Addressing HIV stigma* *-Building hope and reasons for living*	*"I think it will be ok if they will be able to get counseling like what you gave me today."* *"You can also tell them not to worry about anyone who may stigmatize them because life is more important than what anyone else is thinking of them."*

HIV Journey

The interviews started by asking participants to share their stories of being diagnosed with HIV. Participants talked about what happened before they decided to get tested, the day they

were tested and diagnosed with HIV, and what happened afterward. They explained what they thought about telling their family, their feelings about HIV stigma, and how well/badly they adhered to their HIV medication.

HIV Testing and Diagnosis

All participants (100%) shared powerful stories about their journey with HIV, including the testing and diagnosis phase. They shared how difficult it was to decide on testing and it was even more challenging when they were diagnosed HIV positive, they expressed the unexpected nature of this revelation at the time of testing. For instance, a 42-year-old woman disclosed the emotional challenges of testing positive for HIV during her pregnancy. She described her initial feelings of acute distress, including major concerns about her immediate and long-term health, the health of her unborn child, and the dilemma of disclosing her status to her husband and others.

> *"It was discovered when I was pregnant with my first child. To tell the truth, I felt very bad and I cried a lot. Even though I was quick to say that I wanted to know about my health condition, frankly, that was one of my worst days. Where was I going to start? What was I going to do? When I got home, how could I tell my husband? I should die."* (Female, age 42).

HIV Stigma

When asked about HIV stigma or mistreatment, participants shared experiences of enacted stigma (i.e., stigmatizing actions received from others), feelings of self-blame and shame directed toward themselves, and fears of stigma that might occur of their HIV status were to become known by more people. Several participants expressed how hard it is when people treat them badly because they have HIV, which in some cases directly contributes to thoughts about suicide. One woman shared,

> *"It is very painful [to live with HIV] and it makes me feel very weak. I feel as though I am completely valueless. All the time, I think 'It would be better for me to die. There is no point in continuing to live like this.' It is as if I mean nothing."* (Female, age 28).

Medication Adherence

All but one of the participants (93%) reported consistently adhering to their HIV medication at the time of the interview; however, one person reported adherence challenges.

> *"Yes, I completely refused to use the medications for five years because my CD4 was high. A time came when they told me that I needed to start the antiretrovirals since my CD4 count was decreasing. I became very sick and I was admitted here..."* (Female, age 60).

Suicidal ideation and Drivers of Mental Health Challenges

Our research looks at the personal experiences of people living with HIV in Kilimanjaro, Tanzania. A shared experience among all our participants was the open discussion about feeling down and contemplating suicide. For example, one woman shared her story that she bought rat poison to end her life, but she ended up praying and aborted her plan of ending her life.

> *"I have considered committing suicide many times. I said, 'Today I must finish myself off. I don't want to continue like this.' I told you that there was a day when I went to buy rat poison. I put it in a cup and went outside while the children were sleeping. I cried a lot and prayed to God to forgive me. I told Him that I wasn't doing this because I wanted to, but because the things in my life were difficult. Whatever I was doing failed and my life was moving backward."* (Female, age 42).

Suicide Attempts

Suicide attempts were very common among the participants. Exemplifying this, below is a quote from a 25-year-old woman who was diagnosed with HIV in 2005. In a moment of intense sadness, she decided to end her life by taking pills.

> *"So that is when I just decided to take a bunch of pills and finish my life off, and as I took the medications, I just managed to swallow two pills. When I was onto the third one, my sister found me and noticed that I was behaving strangely."* (Female, age 25).

Participants were asked to share the drivers of their mental health challenges and a significant number were able to mention reasons related to HIV infections, financial challenges, family conflict, and stigma

HIV Infection and Other Health Challenges

The emotional challenges caused by HIV infection continually emerged as a key burden. A significant number of participants described experiencing symptoms of depression and anxiety linked to their HIV status, as well as serious social challenges, that combined to contribute to feelings of hopelessness and suicidal ideation. One woman shared that she was depressed because she didn't know where she contracted the HIV infection and was experiencing stigma from her family members.

> *"What depressed me is that no one could tell me how I got HIV. It causes me so much pain because my relatives regard me as an outcast."* (Female, age 50).

Social Determinants of Suicidal Ideation

Social determinants arose as important challenges that contributed to suicidal thoughts, including financial stress, family conflict, housing insecurity, and food insecurity.

Financial Stress

Financial stress emerged as a significant driver of mental health challenges. Participants associated depression and suicidal thinking with practical challenges like lack of money. One participant described a health crisis, exacerbated by limited financial resources, that contributed to emotional distress. This serves as a powerful reflection of the obstacles individuals with HIV may face within the healthcare system.

> *"I was once sick and I didn't have any money. I came here and I was supposed to pay for treatment. I was coughing a lot, I had chest tightness, and I wasn't feeling well. I was supposed to pay for lab tests but I didn't have any money."* (Female, age 39).

Family Conflicts, Isolation, and Stigma

Family conflict emerged as a significant factor contributing to suicidal ideation, with a majority of respondents expressing that conflicts within their families added to their distress. One instance involves a 42-year-old woman who, upon sharing her suicidal thoughts with a family member, received an unsupportive and negative response.

> *"Someone said, 'If you want to die, just kill yourself. No one has any need for you and it is only the children who will suffer. So, if you want to kill yourself, go ahead.' I just left and went home."* (Female, age 42).

Challenges with Housing

Challenges associated with living arrangements posed a significant source of mental stress for most participants. More than half participants either lacked proper housing or had to reside with relatives, sharing rooms with others, including children. This situation made it challenging for them to use their HIV medication due to a lack of privacy.

> *"Life is a very long journey. Living with family members is a challenge because I live with their children in their rented house where I share a room with the children. Therefore, these caused me stress and I said to myself, 'Oh my God, help me to get my room so that I can live on my own and be free."* (Female, age 28).

Food Insecurity

Challenges in access to adequate, healthy foods were another common theme among participants who were struggling to manage to live with HIV and experiencing thoughts of suicide. For example, one woman described being unable to provide for her child's basic needs, which had a profound mental and emotional toll.

> *"My child was hungry and I didn't know what to do. So, I thought it would be better to kill myself. So that was the reason."* (Female, age 39).

Mental Health Treatment and Coping Strategies

When asked about their mental health coping strategies, a significant number of participants did not mention utilizing formal mental health treatments like counseling, psychiatry, or psychology

services. Instead, they reported seeking support from alternative sources, including seeking guidance and reassurance from religious leaders and confiding in HIV clinic staff. For those who did not have anyone to talk to, some turned to coping through substance abuse.

Religious Coping

Most participants revealed that they turn to religious leaders for prayers and advice as a primary means of addressing their mental health-related challenges, including thoughts of suicide.

> *"I recently approached the pastor seeking assistance regarding suicidal thoughts. Initially, the pastor shared passages from the Bible with me, emphasizing the gravity of suicide as a significant sin under any circumstances."* (Female, age 42).

HIV Clinic staff

Due to the shortage of mental health care professionals, a significant number of participants reported turning to HIV clinic nurses when they experienced mental health challenges. They rely on clinic staff to explain their experiences and receive support from the nurses.

> *"When I have deep thoughts and feel unable to solve them myself, I always seek help from nurses."*

> *"Furthermore, the service providers at the CTC counseled me and introduced me to individuals who had children and families, showing me how they lived their lives".*

Substance use.

Upon encountering mental health challenges, a few participants turned to substance abuse as a coping mechanism. They commonly used alcohol in an attempt to feel better.

> *"That's my only way of reducing stress when I get stressed out by him running around with different women. So, I just go and drink. I feel like I do not have another option...*

Feedback on the IDEAS for Hope Counseling Intervention

Before concluding the interviews, participants were invited to share their opinions on the development of the IDEAS for Hope counseling intervention, which will involve universal

screening for suicidal ideation in HIV care and linkage to telehealth-delivered counseling sessions. Participants provided feedback on the proposed intervention content, the acceptability of the model, and anticipated challenges that might arise.

Suggestions for Intervention Content

Participants highlighted the significance of communicating to patients that HIV is not an immediately life-threatening disease when you adhere to your antiretroviral medication. Participants emphasized the critical role of medication adherence in long-term health and maintaining daily functioning.

> *"You should tell [patients] that HIV is not a disease that can kill unless you neglect the medicine. If you take your medicine you will be well, your work will go on, and your family will grow".* (Female, age 52).

Addressing HIV Stigma

Concerning HIV stigma, participants emphasized the importance of maintaining a positive mindset, highlighting that by prioritizing a healthy lifestyle and adhering to medication, individuals can lead long and fulfilling lives.

> *"You can tell (patients) not to worry about anyone who may stigmatize them because life is more important than what anyone else thinks. They should know that if they eat well and take their medications on time, they can have children who are healthy and can even live long enough to see their grandchildren".* (Female, age 25)

Building Hope and Reasons for Living.

Participants highlighted the importance of reassuring individuals who are newly diagnosed with HIV and fostering a sense of hope for the future.

> *"When someone is newly diagnosed with HIV, they need to be reminded that it is not the end of the world and that there is still hope for tomorrow. Some medications can help them to live a normal life".* (Male, age 28)

4. Discussion

In our study, we explored the numerous factors contributing to suicidal ideation among people living with HIV. Our findings highlighted the significant impact of stigma, financial stress, and family conflicts on mental well-being among people living with HIV. In this way, individuals expressed the deep emotional impact of HIV diagnosis. Prior research underscores the negative social, cultural, and religious perceptions surrounding HIV, which exacerbate the already complex landscape of psychological distress experienced by individuals living with HIV (Fauk et al., 2024; Knettel et al., 2020 & Knippler et al., 2024). These studies highlight how HIV and mental health are related, shedding light on the different factors that influence emotional well-being in this population.

Our study findings support the importance of adopting a holistic approach to HIV care that extends beyond the traditional biomedical model by attending to patients' emotional health. Integrating mental health screening into routine HIV care can serve as a crucial tool in identifying individuals at risk of suicidal ideation and providing targeted support (Knettel et al., 2023 & Minja et al., 2023). Moreover, interventions should prioritize addressing the emotional impact of an HIV diagnosis, combatting stigma, and equipping individuals with coping strategies to navigate the multifaceted challenges they face (Madundo et al., 2023). By acknowledging and addressing the complex psychosocial factors influencing mental well-being among individuals living with HIV, we can work towards more comprehensive and effective interventions that support their overall health and quality of life. (Knippler et al., 2024).

Social determinants, particularly poverty, play a crucial role in shaping mental health outcomes. For example, poverty has been linked to higher risk and poorer outcomes for both HIV and mental health challenges, including increased risk for suicide (Iemmi et al., 2016& Kalichman et al., 2015). Similarly, our study highlights that housing challenges, food insecurity, and family conflicts contribute significantly to suicidal ideation among individuals with HIV in

Kilimanjaro. Thus, there is a clear need for comprehensive interventions that address not only physical and mental health but also underlying socioeconomic challenges (McLaughlin et al., 2012). We recommend efforts to reduce suicidal ideation extend beyond clinics, involving collaborative initiatives with healthcare, social services, and community organizations (Substance Abuse and Mental Health Services Administration, 2017). Housing assistance, financial support, and community-based interventions are vital in creating a supportive environment that tackles broader structural issues affecting mental health and HIV outcomes (Riley et al., 2012).

Additionally, our study's findings shed light on the utilization of alternative support systems, particularly religious leaders, for mental health treatment and coping skills among individuals living with HIV in Kilimanjaro. Participants often sought comfort and support through religious guidance and prayers as their main way to deal with their mental health struggles, including suicidal thoughts. This underscores the cultural and spiritual dimensions influencing coping mechanisms within this population. Notably, a study conducted by Lusk et al. (2018) in the United States revealed a significant association between religion and reduced suicidal thoughts, suggesting the potential effectiveness of religious leaders in supporting interventions for suicidal thoughts. Collaborative models that integrate both formal mental health services and community-based support, involving religious leaders, can enhance the accessibility and acceptability of mental health care for individuals living with HIV. However, it is important to acknowledge that data on religion and coping may be mixed, sometimes resulting in increased stigma depending on the orientation of the church, because people with suicidal thoughts may be considered sinners and religion may be considered a potential source of stigma (Potter, 2021). Finally, our study identified a crucial need for intervention, supported by participants' positive feedback on the proposed IDEAS for Hope counseling intervention (Knettel et al., 2023). Participants emphasized the necessity of HIV education to enhance a sense of hope for the future, encourage medication adherence, and address HIV stigma (Mutumba et al., 2015). In another study conducted in a five-county area in central Illinois, participants also exhibited high support

for the use of telehealth in interventions, echoing themes identified by Weinzimmer et al. (2021) that illustrate the interest of individuals in under-resourced communities in utilizing telehealth for mental health care. This study highlighted significant disparities in access to mental health counseling and internet connectivity between rural and urban communities in central Illinois. Despite these challenges, rural residents demonstrated a greater interest in telehealth interventions. These findings suggest that even in under-resourced areas, there is considerable interest in leveraging telehealth as a means to bridge gaps in mental health care access. Both studies underscore the potential to harness technology to bridge gaps in mental health treatment access.

4.1 Study strengths and limitations

The strengths of this study lie in its qualitative approach, allowing for an in-depth exploration of the lived experiences and perspectives of individuals living with HIV and experiencing suicidal ideation in the Kilimanjaro region of Tanzania. The inclusion of diverse narratives and the use of direct quotes enhance the authenticity and richness of the findings. Moreover, the feedback on the IDEAS for Hope counseling intervention provides practical insights for the development of a mental health intervention, directly informed by people with lived experience.

Limitations of the study include its cross-sectional design, which hinders the ability to establish causation or observe changes over time. We obtained valuable qualitative data; however, we acknowledge that the perspectives of these 15 individuals in a single region of the country may not be representative of the entire population. Further, the reliance on self-reported experiences introduces potential recall bias. Additionally, there is a noted gender imbalance in the sample, as our study included only two men out of fifteen participants. However, this gender breakdown is representative of the individuals seeking HIV care who endorsed suicidal ideation and were eligible for the study, who were overwhelmingly female. The inclusion of only two

CTC clinics located in urban areas may not accurately reflect other clinics in the region, such as in more rural areas.

4.2 Implications for policy and practice

The findings of this study have significant implications for policy, practice, and research, particularly in the context of HIV care and mental health support in Kilimanjaro, Tanzania. Policymakers should consider integrating universal mental health screening and support into routine HIV care services (Remien et al., 2019). Comprehensive interventions that address the emotional impact of HIV diagnosis, combat HIV stigma, and provide coping strategies for social determinants should be prioritized (Mutumba et al., 2015). Policies aimed at improving housing security, addressing food insecurity, and providing financial support for individuals living with HIV can contribute to mitigating the drivers of suicidal ideation.

Additionally, the positive feedback on the proposed IDEAS for Hope Counseling Intervention suggests the need for innovative, accessible, and culturally sensitive mental health interventions within the healthcare system. Collaborative efforts between healthcare providers, community organizations, and religious leaders should be encouraged to create a holistic framework that addresses the complex mental health needs of this population.

4.3 Implications for further research

While this study provides valuable insights into the mental health challenges of individuals living with HIV in Kilimanjaro, further research is warranted to deepen our understanding and inform targeted interventions. Future studies could explore the effectiveness of integrated mental health and HIV care models in improving mental health outcomes, including more rural communities. Additionally, exploring the role of cultural and spiritual coping mechanisms, including the involvement of religious leaders, in mental health outcomes would contribute to a better understanding of coping strategies within this population. Longitudinal

studies tracking the mental health paths of individuals living with HIV over time could offer valuable information for designing sustainable interventions.

5. Conclusion

This study sheds light on the pressing mental health challenges faced by individuals living with HIV in Kilimanjaro, emphasizing the need for comprehensive and culturally sensitive interventions. The integration of mental health screening into routine HIV care, addressing social determinants, and leveraging cultural coping mechanisms are crucial for improving mental health outcomes. The positive feedback on the proposed IDEAS for Hope counseling intervention suggests the promise of universal screening and telehealth-delivered counseling. The next steps involve translating these findings into testable interventions and actionable policies, collaborating with stakeholders to implement integrated mental health and HIV care, and continually evaluating and refining interventions based on ongoing research. The holistic approach presented in this study serves as a foundation for shaping a more supportive and resilient environment for individuals living with HIV in Kilimanjaro and beyond.

Appendix A

Table 3. Demographic information of study participants samples 80

• Median [(Q1, Q3)]	42(36,49)
Gender	
• Female	62(77.5)
• Male	18(22.5)
Education	
• Grade 7 or above	77(96.3)
• No formal education	3(3.7)
Relationship Status	
• Married/cohabiting	34(42.5)
• Single, • divorced, • widowed, • separated	46(57.5)

Appendix B

Table 4. Summary of Interview Guide

Summary of Semi-structured Interview Guide	
Initial questions	Additional probes
Can you share with me what it was like for you when you were told you had HIV?	When were you first diagnosed?
Can you tell me about any challenges you've faced in taking ARVs consistently?	What were some reasons for these challenges?
How confident do you feel about taking HIV medication moving forward?	Are there reasons you might stop the medication?
Have you experienced any feelings of sadness, stress, or worry related to your HIV status?	What caused those feelings?
Have you ever thought about harming yourself or ending your life since being diagnosed with HIV?	How often have you felt this way? When was the last time you felt this way?
If you had these thoughts, who did you speak to? How did this help (if at all)?	What types of support would help to keep you safe if you ever had these thoughts again?
Have you ever experienced stigma or mistreatment from anyone in your life because you are living with HIV?	[If yes] What did this look like? How did you feel?
What topics or messages do you think would be important to include in a counseling intervention for people living with HIV who are struggling with thoughts of ending their lives?	
Do you think patients would be comfortable with having counseling phone calls in a private office at the HIV clinic?	How about having counseling over WhatsApp?
If you were meeting with a counselor via WhatsApp, how many sessions would you like to have?	How long would you like the sessions to be?
If you had the opportunity to participate in this type of intervention, would you be interested?	How do you think it would help?

What concerns or suggestions do you have about an intervention like this?	

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