

Looking toward tomorrow: Exploring the dynamics of future anxiety in the community life of people living with HIV

Menatap masa depan: Eksplorasi dinamika kecemasan masa depan dalam kehidupan bermasyarakat pada Orang dengan HIV (ODHIV)

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ABSTRACT

Living with HIV requires not only long-term management of physical health but also affects how individuals view their future. For people living with HIV (PLHIV), the future is often seen as uncertain and sometimes threatening, with ongoing concerns about survival, relationships, and social roles. In this context, this study aims to explore the psychological dynamics of future-oriented anxiety in the everyday lives of PLHIV communities. The study employed a mixed-methods approach with a qualitative-dominant, exploratory sequential design. Primary data were collected through community observation, in-depth interviews, and Focus Group Discussions (FGDs), and were subsequently enriched by quantitative screening using the Future Anxiety Scale (FAS) as a supportive tool for mapping dimensions of future-related anxiety. Thematic analysis was conducted with the assistance of NVivo software to systematically identify patterns and thematic structures. The findings indicate that future anxiety is a dominant and relatively persistent psychological experience, ranging from negative expectations about the future to observable effects on emotions, physical responses, and everyday behavior. Four main themes were identified: perceiving the future as a domain of threat, a sense of lack of control over life direction, the dominance of negative future imagery accompanied by emotional distress, and impacts on daily functioning and social roles. In addition, the study reveals the ambivalent role of the community, which simultaneously functions as a protective factor and as a source of collective anxiety through ongoing social interactions. These findings underscore that future anxiety cannot be understood solely as an individual concern, but rather as a psychosocial experience shaped within a community context. This study contributes conceptually to HIV and mental health research by positioning future orientation as a critical lens for understanding the psychological well-being of PLHIV.

ABSTRAK

Hidup dengan HIV tidak hanya menuntut pengelolaan kondisi kesehatan fisik jangka panjang, tetapi juga membentuk cara individu memandang masa depan. Bagi Orang dengan HIV (ODHIV), masa depan sering kali muncul sebagai ruang yang dipenuhi ketidakpastian, ancaman, serta pertanyaan berkelanjutan terkait keberlangsungan hidup, hubungan interpersonal, dan peran sosial. Penelitian ini bertujuan untuk mengeksplorasi dinamika psikologis kecemasan masa depan (future anxiety) dalam kehidupan komunitas ODHIV. Penelitian ini menggunakan pendekatan metode campuran dengan desain eksploratori sekuensial yang didominasi oleh pendekatan kualitatif. Data utama dikumpulkan melalui observasi komunitas, wawancara mendalam, dan Focus Group Discussion (FGD), kemudian diperkaya dengan skrining kuantitatif menggunakan Future Anxiety Scale (FAS) sebagai alat bantu untuk memetakan dimensi kecemasan terkait masa depan. Analisis tematik dilakukan dengan bantuan perangkat lunak NVivo untuk mengidentifikasi pola dan struktur tema secara sistematis. Hasil penelitian menunjukkan bahwa kecemasan masa depan muncul sebagai pengalaman psikologis yang dominan dan relatif persisten, mulai dari ekspektasi kognitif negatif hingga dampak nyata pada emosi, respons fisiologis, dan perilaku sehari-hari. Empat tema utama yang teridentifikasi meliputi: persepsi masa depan sebagai ruang ancaman, perasaan kurangnya kontrol terhadap arah kehidupan, dominasi gambaran masa depan yang negatif disertai distress emosional, serta dampaknya terhadap fungsi sehari-hari dan peran sosial. Selain itu, penelitian ini juga mengungkap peran ambivalen komunitas, yang di satu sisi berfungsi sebagai faktor protektif, namun di sisi lain dapat menjadi sumber kecemasan kolektif melalui interaksi sosial yang berlangsung. Temuan ini menegaskan bahwa kecemasan masa depan tidak dapat dipahami semata-mata sebagai persoalan individual, melainkan sebagai pengalaman psikososial yang terbentuk dalam konteks komunitas. Penelitian ini memberikan kontribusi konseptual dalam kajian HIV dan kesehatan mental dengan menempatkan orientasi masa depan sebagai lensa penting dalam memahami kesejahteraan psikologis ODHIV.

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1. INTRODUCTION

Human Immunodeficiency Virus (HIV) remains a major global public health concern. Recent reports indicate that millions of people worldwide are currently living with HIV, with significant numbers of new infections and ongoing treatment needs each year (UNAIDS, 2023; World Health Organization, 2023). Advances in antiretroviral therapy (ART) have greatly improved life expectancy, transforming HIV from a fatal disease into a manageable chronic condition. However, longer survival does not remove the psychosocial challenges associated with the diagnosis. People living with HIV (PLHIV) continue to face long-term issues such as stigma, uncertainty about their health, economic vulnerability, and instability in social roles, all of which can affect their psychological well-being. HIV is a viral infection caused by the Human Immunodeficiency Virus, which attacks the immune system, particularly CD4 cells, weakening the body's defenses and increasing the risk of opportunistic infections if left untreated (World Health Organization, 2023).

Prior to this study, an initial assessment was conducted through informal interviews with several members of a peer-support community for people living with HIV (PLHIV) in Malang. One key question asked during these preliminary interviews was, "What worries you the most when you think about your own future?" Participants' responses consistently reflected concerns related to long-term health stability, economic security, relationship continuity, and social acceptance. Some participants expressed fears of declining physical health that could limit their ability to work or taking care of family members, while others reported uncertainty about financial stability in later life. Younger participants described anxiety related to the potential disclosure of their HIV status and sexual orientation, which they believed could lead to rejection or loss of support. In addition, several participants expressed concerns about aging alone without sufficient relational or community support. Across these accounts, the future was often viewed as uncertain, fragile, and filled with potential risks rather than opportunities, indicating that future-oriented anxiety is a prominent psychological concern within this community context.

Human Immunodeficiency Virus (HIV) infection is a chronic health condition that requires long-term management across multiple life domains. Advances in antiretroviral therapy (ART) have significantly increased the life expectancy of PLHIV, shifting HIV from being viewed solely as a terminal illness to a chronic condition that allows individuals to live for extended periods. However, prolonged survival is accompanied by persistent uncertainties related to future health status, continuity of treatment, economic stability, social relationships, and the sustainability of individual roles within families and society. These uncertainties render future orientation a salient psychological issue in the lives of PLHIV (Lin et al., 2023; Obosi & Aruoture, 2025; Patrício et al., 2019; Yuan et al., 2024; Zhang et al., 2009).

Over time, PLHIV face a range of psychological challenges that are often enduring and recurrent. Previous studies have shown that PLHIV are vulnerable to psychological distress arising from a combination of biological, psychosocial, and structural factors, including lifelong treatment demands, stigma and discrimination, limited social support, and economic pressures. These challenges influence not only current psychological well-being but also shape how individuals perceive and interpret their future. Future orientation becomes a space where worries, hopes, and fears intersect, potentially exerting a broader impact on the psychological well-being of PLHIV (Ammirati et al., 2015; Drabarek & Rzeszutek, 2025; Remien & Mellins, 2007; Shi et al., 2025).

Although mental health among PLHIV has been widely studied, research has predominantly focused on depression (Patrício et al., 2019; Yuan et al., 2024), general anxiety (Cahill et al., 2025; Chantaratin et al., 2022), stigma (Ammirati et al., 2015; Drabarek & Rzeszutek, 2025), and quality of life (Shi et al., 2025). Psychological aspects related specifically to future orientation have received comparatively less attention. One relevant but underexplored construct is future anxiety, defined as anxiety oriented toward uncertainty and perceived threats related to the future. Future anxiety reflects a tendency to imagine the future negatively, perceive limited control over forthcoming events, and experience distressing emotional responses when contemplating what lies ahead (Patrício et al., 2019; Yuan et al., 2024; Zaleski, 1996; Zaleski, 2005). In the context of PLHIV, future anxiety may represent a particularly salient issue, given that the future is often perceived as uncertain and fraught with risk.

Understanding future anxiety among PLHIV becomes increasingly important within community context. For many PLHIV, communities serve as sources of social support and become a secure spaces for sharing experiences, identities, and collective meanings. Empirical studies have consistently shown that social support, peer connectedness, and community belonging play a crucial role in buffering psychological distress among PLHIV, contributing to improved mental health outcomes and treatment adherence (Asrat et al., 2020; Remien & Mellins, 2007; Van Der Heijden et al., 2013; Yuan et al., 2024). Conversely, social isolation, stigma, and weak support networks have been associated with heightened anxiety, depressive symptoms, and reduced quality of life. At the same time, communities may serve as arenas in which future-related anxieties are collectively negotiated, through shared narratives of hope as well as shared concerns. Collective discussions about health uncertainty, economic vulnerability, and relational stability can shape how individuals interpret their own futures, either reinforcing threat perceptions or fostering adaptive meaning-making. Therefore, understanding future anxiety cannot be confined to the individual level alone, but must also consider the interpersonal and collective dynamics that emerge within PLHIV communities.

Despite its relevance, empirical research on future anxiety among PLHIV remains limited in several respects. First, there is a scarcity of qualitative, in-depth studies that explore future anxiety, resulting in an incomplete understanding of how PLHIV subjectively experience and interpret their future. Second, the majority of existing researches conceptualize anxiety primarily as an individual phenomenon, limiting attention to collective dimensions and the social contexts that shape PLHIV's lives (Ammirati et al., 2015; Chantaratin et al., 2022; Drabarek & Rzeszutek, 2025; Shi et al., 2025). Third, single-method quantitative approaches, while useful for initial mapping, are limited in their capacity to capture the complexity of psychosocial dynamics experienced by PLHIV in everyday life.

Addressing these gaps, the present study focuses on exploring the psychological dynamics of future anxiety within PLHIV communities using a qualitative approach enriched by supportive quantitative screening. This approach allows for an in-depth examination of the experiences, sources, and meanings of future anxiety as lived by community members, while also mapping prominent dimensions of future anxiety to reinforce qualitative findings. Accordingly, this study does not aim to test causal relationships or intervention effectiveness, but rather to provide a deeper understanding of how future anxiety is formed and operates within the context of PLHIV community life.

This study aims to explore the psychological dynamics of future anxiety in PLHIV communities through qualitative assessment enriched by supportive quantitative screening.

Specifically, the study aims to identify experiences and sources of future anxiety among PLHIV communities, map dominant dimensions of future anxiety as a complementary for qualitative findings, and develop a conceptual depiction of future anxiety dynamics within PLHIV community contexts. In line with these objectives, the study addresses two primary research questions: how future anxiety is experienced and interpreted by members of PLHIV communities, and which dimensions of future anxiety are most prominent based on quantitative screening.

2. METHODS

Research Design

This study employed a mixed-methods approach with qualitative dominance, using an exploratory sequential, qualitative-driven design (Bastable et al., 2023; Hernández-Johnson & Bendixen, 2025; Morse & Cheek, 2015; Younas et al., 2025). This design was applied to enable in-depth exploration of the psychological dynamics of future anxiety as experienced by People Living with HIV (PLHIV), which was subsequently complemented by quantitative screening to support the mapping of future-related anxiety dimensions. Within this design, qualitative data served as the primary source for understanding the phenomenon, while quantitative data were used to complement and clarify the structure of qualitative findings. The Future Anxiety Scale (FAS) was employed as a supportive quantitative screening instrument to aid in the mapping and conceptualization of future anxiety.

Participants and Setting

The study participants were People Living with HIV (PLHIV) within a community context in Malang, Indonesia. A total of 31 participants were involved in this study. The research was conducted in community settings to capture psychosocial dynamics formed through interactions, roles, and shared collective experiences among members. Participants were selected using purposive sampling, based on their relevance to the exploratory aims of the study. Inclusion criteria were: (1) Individuals identified as PLHIV; (2) Active involvement in community activities; and (3) Willingness to participate in all stages of the research assessment. Individuals who did not meet these criteria or who did not provide informed consent were excluded from the study. The participants varied in terms of age, gender, and duration of living with HIV, allowing the study to capture diverse perspectives regarding experiences of future-related anxiety within the community context.

Research Procedures

The research procedures (see Figure 1) were designed as a sequential process to develop a comprehensive understanding of future-related anxiety among PLHIV. The process began with an initial qualitative assessment involving community observation, in-depth interviews, and Focus Group Discussions (FGDs) to explore participants' experiences, perceptions, and sources of future anxiety as encountered in everyday life. These initial findings were then complemented by supportive quantitative screening using the Future Anxiety Scale (FAS) to map prominent dimensions of future anxiety and to clarify the structure of qualitative findings. The final stage involved synthesizing findings by integrating qualitative themes

with dimensions of future anxiety. This integration provided a more holistic understanding of the psychological dynamics of future anxiety, capturing both individual experiences and the psychosocial patterns shaped within the community context.

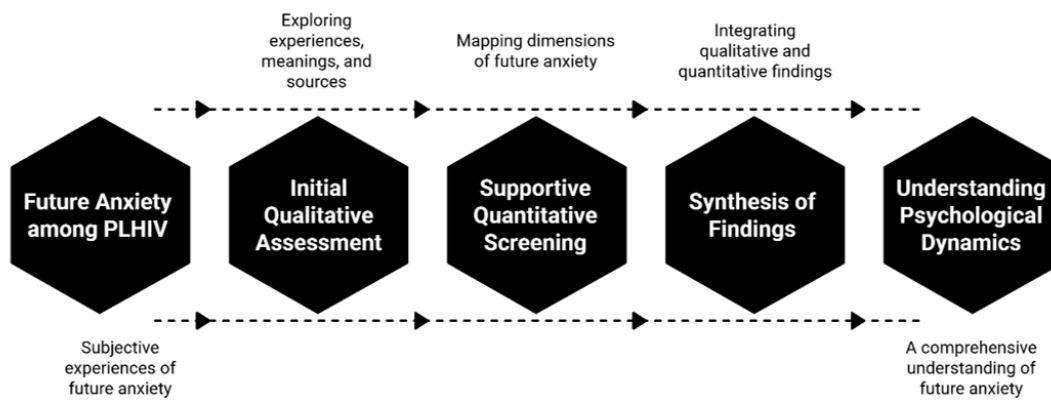


Figure 1. Procedure for analyzing future-related anxiety among PLHIV

Research Instruments

The research instruments consisted of semi-structured interview and Focus Group Discussion (FGD) guidelines designed to explore participants’ experiences, perceptions, and sources related to future anxiety among People Living with HIV (PLHIV). The interview and FGD guides were developed based on the conceptual framework of future anxiety proposed by Zaleski (1996) and supported by literature on psychosocial challenges experienced by PLHIV. The semi-structured format allowed participants to elaborate on their personal experiences while ensuring that discussions remained focused around the dimensions of future-oriented concerns, including perceptions of uncertainty, perceived threats, emotional responses toward the future, and the perceived impact of these concerns on daily functioning. The key aspects and examples of open-ended questions used in the interview guide are presented in Table 1.

Table 1. Interview guide

Interview Aspect	Example of Open-Ended Questions
Perceptions of the future	“When you think about your future, what usually comes to your mind?”
Perceived future uncertainty	“Do you feel that your future is predictable or uncertain? Why?”
Perceived future threats	“What kinds of worries or concerns do you have about your life in the future?”
Sense of control over life direction	“To what extent do you feel able to influence what will happen in your future?”
Emotional responses toward the future	“How do you usually feel when thinking about your future?”
Impact on everyday functioning	“Do your concerns about the future influence how you make decisions or plan your life?”

Following the individual interviews, focus group discussions (FGDs) were conducted to explore shared experiences and collective narratives of future-related anxiety within the community context. Observation sheets and field notes were also used to document social

interactions, communication patterns, and contextual dynamics during community activities and research sessions. The main discussion aspects and examples of guiding questions used in the FGD sessions are presented in Table 2.

Table 2. Focus Group Discussion (FGD) guide

Discussion Aspect	Example of Open-Ended Questions
Shared experiences of uncertainty	"What kinds of concerns about the future are commonly discussed among community members?"
Community narratives about the future	"What hopes or fears about the future are often shared within this community?"
Community support and coping strategies	"How does the community help members cope with worries about the future?"
Influence of community interaction	"Do discussions within the community influence how you personally think about your future?"
Collective meaning of the future	"How do community experience shape members' perspectives on life and the future?"

Table 3. Blueprint of the Future Anxiety Scale (FAS)

Dimension	Item Number	Item Statement
Perceived uncertainty about the future	1	My future is uncertain
	5	I am afraid to plan my future
	6	I worry about bad things that might happen
	17	I am afraid that the problems I have now will continue for a long time
	23	I am afraid that my life will turn out badly in the future
Fear of failure and life difficulties	7	I am afraid that I will fail to cope with growing difficulties
	8	I am anxious about failures waiting for me
	9	I am very afraid that I will sometimes face crises or difficulties in life
	12	I worry that I will not be able to provide a decent life for my family
	16	I am anxious that I will not be able to achieve my goals in the future
Emotional distress about the future	2	I am afraid that a great disaster may happen soon
	3	I tremble with fear when thinking about what may happen tomorrow, next month, or next year
	10	I feel tense and anxious when thinking about my future
	15	I fear that changes in socio-economic or political conditions will threaten my future
Negative expectations about life outcomes	18	Even when everything goes well, fate will not favor me
	21	I am afraid that others will think badly of me in the future
	22	I fear that in a few years I will see my life as meaningless
	24	I am afraid that I will not receive recognition in my work
Positive expectations toward the future (reverse items)	25	I worry that I will become a burden to others in old age
	4	I believe that in the future I will not be alone or rejected
	11	I believe that I will achieve the most important goals in my life
	14	I believe that I will be able to solve my own problems in the future
	19	Life is worth living in this beautiful and ever-changing world
	20	I am not afraid that people will harm each other in the future

In addition to qualitative instruments, the study employed the Future Anxiety Scale (FAS) developed by Zaleski (1996) as a supportive quantitative screening instrument to assess future-oriented anxiety. The scale consists of 25 items rated on a 7-point Likert scale ranging from 0 (strongly disagree) to 6 (strongly agree). Higher scores indicate higher levels of anxiety related to uncertainty and perceived threats about the future. Several items expressing positive expectations toward the future are reversely scored during data processing. The instrument used in this study was adapted from the translated version of the Future Anxiety Scale and applied as a descriptive screening tool to map patterns of future anxiety among participants.

This study used a Bahasa Indonesia version of the instrument, translated using a forward-backward translation procedure to ensure conceptual equivalence with the original version. Previous studies have reported good internal consistency for the FAS, with reliability coefficients generally exceeding $\alpha = .80$ (Zaleski, 1996). In the present study, the FAS was used as a descriptive screening tool to map the dimensions of future anxiety experienced by participants, rather than for hypothesis testing. These dimensions include anticipation of future threats, perceived uncontrollability over life direction, negative imagery about future outcomes, emotional distress when thinking about the future, and the impact of these concerns on current functioning and everyday decision-making. The blueprint of the Future Anxiety Scale used in this study, including the dimensions, item numbers, and item statements, is presented in Table 3.

Data Analysis Techniques

Qualitative data were analyzed using thematic analysis, with the assistance of NVivo software to enhance the rigor and transparency of the analytic process (Allsop et al., 2022; Braun & Clarke, 2006; Naeem et al., 2023). Interview and FGD data were first transcribed verbatim and imported into NVivo for systematic coding. The analysis proceeded through several stages, including familiarization with the data, initial coding, development of nodes, clustering of related codes into themes, and refinement of thematic structures. NVivo was used to organize qualitative data, trace relationships among nodes, and visualize thematic patterns across data sources. Through this process, recurring patterns and thematic relationships were identified to construct an interpretative understanding of the psychological dynamics of future anxiety among participants. To maintain analytic coherence and credibility, coding involved repeated comparisons across interview transcripts, FGD discussions, and observational field notes.

Quantitative data from the Future Anxiety Scale (FAS) were analyzed using descriptive statistics to depict the distribution of levels and dimensions of future anxiety among participants. The integration of qualitative and quantitative findings followed principles of methodological triangulation in mixed-methods research, in which quantitative screening results were used to complement and clarify qualitative interpretations rather than to test causal relationships or statistical hypotheses of community psychology (Creswell & Clark, 2017; Javdani et al., 2023). Within the context of community psychology, mixed-methods approaches are particularly valuable for capturing the complex interactions between individual psychological experiences and the broader social environments in which those experiences are embedded. By combining in-depth qualitative exploration with supportive quantitative mapping, this approach provides a more comprehensive understanding of how psychological phenomena such as future anxiety are shaped by both individual cognitive and

emotional processes and broader social factors, including collective experiences, relationships, and community dynamics among PLHIV.

Ethical Considerations

This study was conducted in accordance with established ethical principles for research involving human participants. All participants received clear explanations regarding the objectives, procedures, and potential implications of the study prior to their participation. Each participant indicated their voluntary agreement to take part in the study by completing and signing an informed consent form, confirming that they fully understood the purpose of the research and their rights as participants. Participant confidentiality was strictly maintained throughout the research process through the use of codes or initials in all stages of data collection, analysis, and reporting. In addition, the research was conducted with the approval and cooperation of the PLHIV community organization involved, ensuring that the study respected the social context and ethical sensitivities associated with community-based research involving vulnerable populations.

3. RESULTS & DISCUSSION

This section presents and discusses the main findings of the study on the psychological dynamics of future anxiety among People Living with HIV (PLHIV) by integrating qualitative analysis and supportive quantitative screening. The findings are organized to illustrate how future-related anxiety is experienced, interpreted, and enacted in participants' everyday lives, both at the individual level and within social and community contexts. Rather than presenting qualitative and quantitative results as separate entities, the findings are articulated as an interwoven analytic narrative, in which quantitative data serve to reinforce and validate the structure of qualitative themes. The discussion is conducted interpretatively, drawing on future anxiety theory and Bronfenbrenner's ecological framework to situate experiences of future-related anxiety within a broader psychosocial context. Through this approach, the Results and Discussion section aims not only to describe patterns of findings, but also to explicate their meanings and implications for understanding the mental health of PLHIV in community settings. The research results consist of a description of the data obtained in the research. The data in question is not raw data that is still or needs to be processed, but data resulting from analysis or hypothesis testing that clearly answers research questions and shows the latest findings obtained. If presented in the form of tables or pictures, the meaning should be easy for readers to understand quickly.

Future Anxiety as a Recurring Psychological Experience

The assessment results indicate that future anxiety emerges as a recurring and salient psychological experience among participants. Rather than appearing solely as a temporary situational reaction, concerns about the future were frequently expressed across participants' narratives during interviews and group discussions. When the topic of the future was introduced, many participants described thought patterns characterized by worry, uncertainty, and anticipation of adverse outcomes, even when their objective circumstances at the time of assessment were not necessarily in crisis. These responses suggest that reflections about the

future often evoke a pattern of cognitive and emotional reactions that shape how participants interpret their life trajectories.

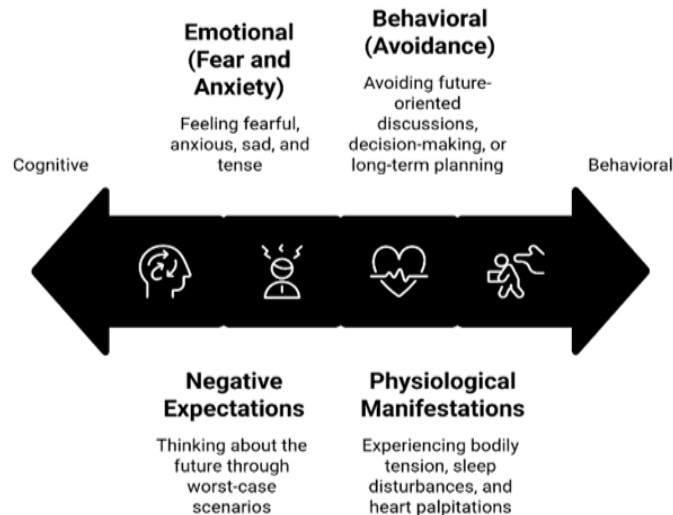


Figure 2. The spectrum of future anxiety, from cognitive to behavioral domains

As illustrated in Figure 2, the dynamics of future anxiety among participants can be understood as a spectrum that progresses from the cognitive domain toward behavioral expression. At the initial end of this spectrum, future-related concerns emerge through cognitive processes involving negative expectations about the future. Participants frequently described imagining possible difficulties, uncertainties, or potential threats when thinking about long-term life trajectories. These cognitive representations appear to constitute an early stage of anxiety, in which the future is perceived as uncertain and difficult to predict.

These cognitive processes are often accompanied by affective responses, marked by the emergence of distressing emotions such as fear, worry, sadness, and emotional tension when participants contemplate or discuss their future. Such emotional reactions function as a bridge between threatening thoughts and bodily responses. At the next stage of the spectrum, future anxiety becomes evident through physiological responses, including bodily tension, sleep disturbances, and heart palpitations, reflecting somatic activation associated with ongoing emotional distress.

At the behavioral end of the spectrum, future anxiety is expressed through patterns of avoidance. Several participants reported avoiding discussions, decision-making, or long-term planning related to the future because such reflections were experienced as emotionally uncomfortable. Although avoidance may temporarily reduce distress, it may also limit opportunities for individuals to develop a stronger sense of agency and a more adaptive orientation toward the future.

Overall, these findings suggest that future anxiety operates as a multidimensional and interconnected psychological experience rather than as a set of isolated symptoms. Concerns about the future appear not only at the level of cognition but also extend into emotional, physiological, and behavioral domains, shaping how participants interpret their present circumstances and anticipate their life trajectories.

Themes of the Psychological Dynamics of Future Anxiety

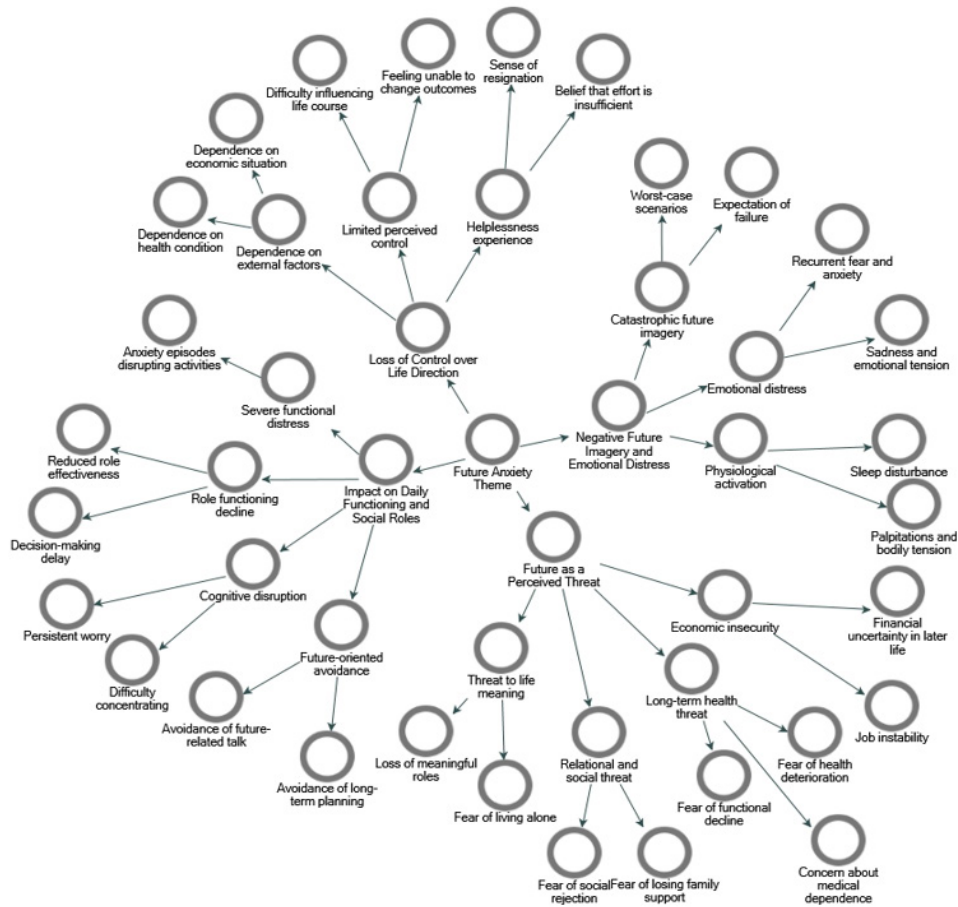


Figure 3. Future anxiety map

Thematic analysis supported by NVivo software indicated that future anxiety is structured as an interconnected set of psychological dynamics, with a central experience of future-related anxiety branching into four main themes. As illustrated in Figure 3, these dynamics reflect layered relationships among how participants perceive the future, their sense of control over life, cognitive-emotional representations of the future, and the impact on daily functioning and social roles. This thematic structure suggests that future anxiety does not operate linearly, but rather through a network of mutually reinforcing psychological experiences.

Overall, the future anxiety map derived from NVivo thematic analysis (Figure 3) demonstrates that future anxiety is composed of an interrelated network of psychological dynamics, in which perceptions of threat, a sense of uncontrollability, negative future imagery, and functional impacts form a unified experiential structure. This configuration underscores that future anxiety does not operate solely at the cognitive level, but extends into emotional, physiological, and behavioral domains, thereby shaping how participants live their daily lives and make sense of the future.

Perceiving the Future as a Domain of Threat

The first theme illustrates how the future is perceived as a domain of concrete and multifaceted threats. In the NVivo map, this theme is represented by the node Perceiving the Future as a Domain of Threat, which is connected to several primary sources of concern. The most salient threats relate to long-term health, including fears of deteriorating health conditions, medical dependency, and loss of physical functioning. These threats are often perceived as unavoidable risks that are difficult to control. One participant expressed this concern by explaining that thinking about the future often evokes fears about declining health and dependency on others: *"Sometimes I feel afraid when thinking about the future. I worry that my health might suddenly get worse, and I might not be able to take care of myself anymore"* (P07).

Beyond health-related concerns, economic threats and concerns about life sustainability also emerged as prominent sources of anxiety. Participants frequently construed the future as a period vulnerable to employment uncertainty, declining financial stability, and economic insecurity in later life. These threats were not experienced in isolation but were closely intertwined with fears of losing meaningful social roles and the inability to maintain independence. As one participant explained, *"My biggest fear is not being able to work anymore. If that happens, I don't know how I will support myself in the future"* (P12). In addition, the future was also perceived as threatening within the relational domain, particularly in relation to interpersonal relationships and social support. Participants described concerns about losing family support, experiencing social rejection, or facing the possibility of living alone in the future. One participant reflected on this concern by stating, *"Sometimes I think about what will happen if my family no longer supports me. I'm afraid that one day I will have to face everything alone"* (P03). Collectively, these narratives illustrate how the future is frequently constructed as a space laden with multidimensional risks rather than as a domain of opportunity.

A Sense of Lack of Control over Life Direction

The second theme centers on a perceived lack of control over life direction. In the NVivo map, this theme is linked to nodes representing limited personal agency and dependence on external factors. Participants often described the future as being strongly shaped by health conditions, economic circumstances, and social responses, all of which were perceived as lying beyond personal control. As one participant explained, *"Sometimes it feels like no matter how much I try to plan my life, my future still depends on things I cannot control, especially my health"* (P05). Such statements reflect a perception that future outcomes are heavily influenced by factors outside individual agency.

This limited sense of control was further reflected in difficulties influencing life trajectories and in beliefs that personal efforts might not be sufficient to alter future outcomes. Several participants described feelings of resignation or helplessness when thinking about the future, suggesting that the future is often perceived as something that simply unfolds rather than something that can be actively shaped. One participant described this experience by stating, *"I try to stay positive, but sometimes it feels like my future is already decided by my condition"* (P14). These perceptions reinforce feelings of uncertainty and contribute to the persistence of future-related anxiety.

Negative Future Imagery and Emotional Distress

The third theme reflects the dominance of negative future imagery accompanied by intense emotional distress. In the NVivo map, this theme is represented by the node Dominance of Negative Future Imagery, which is connected to expectations of failure and catastrophic future scenarios. Participants frequently described imagining the future through pessimistic cognitive representations, often anticipating negative outcomes such as losing employment, deteriorating health, or being unable to maintain social roles. As one participant explained, *"When I think about the future, the first thing that comes to my mind is something bad happening, like losing my job or becoming too sick to live normally"* (P09).

These negative images were closely associated with emotional distress. Participants reported feelings of fear, anxiety, sadness, and emotional tension when contemplating what lies ahead. For some participants, these emotional reactions were also accompanied by physical symptoms such as sleep disturbances, heart palpitations, and bodily tension. One participant described this experience by stating, *"Sometimes I can't sleep at night because my mind keeps thinking about what might happen to me in the future"* (P11). The close interconnection between pessimistic future imagery and emotional responses suggests that future anxiety is experienced not only cognitively but also affectively and physiologically.

Impact on Daily Functioning and Social Roles

The fourth theme describes the impact of future anxiety on daily functioning and social roles. In the NVivo map, this theme is represented by the node Impact on Daily Functioning and Social Roles, which includes several forms of functional disruption. One of the most common patterns observed among participants was future-oriented avoidance. Participants often reported avoiding discussions or plans related to the future because such thoughts were perceived as anxiety-provoking. One participant explained this tendency by stating, *"I prefer not to think too much about the future because it makes me anxious. So, I just focus on getting through today"* (P02).

In addition to avoidance behaviors, future anxiety was also associated with cognitive difficulties such as impaired concentration, attentional problems, and persistent preoccupation with worries about future events. These cognitive disruptions sometimes interfered with participants' ability to perform daily tasks or make decisions. As one participant explained, *"Sometimes my worries about the future make it hard for me to concentrate on what I am doing right now"* (P16). In more severe cases, anxiety about the future appeared to interfere with overall functioning and motivation. One participant described this experience by stating, *"There are times when my worries about the future make me feel overwhelmed, and I lose the motivation to do my daily activities"* (P08). These accounts illustrate how future anxiety extends beyond cognitive concerns and can directly affect daily functioning and social engagement.

Collective Dynamics and the Ambivalent Role of the Community

The analysis further indicates that future anxiety is not experienced solely as an individual psychological phenomenon but is also shaped through social interactions within community contexts. As shown in Figure 4, future-related anxiety emerges as a socially influenced experience in which the community plays an ambivalent role, functioning both as

a protective factor and as a source of collective anxiety. These roles operate simultaneously, forming a distinctive pattern within the group-level dynamics of anxiety.



Figure 4. The ambivalent role of the community in future anxiety

The Community as a Protective Factor

On one hand, the community functions as a protective factor in relation to future anxiety. Social interactions within the community provide a safe space for individuals to share experiences, express concerns, and receive emotional support. The presence of others with similar lived experiences helps reduce psychological isolation and strengthens feelings of acceptance, such that anxiety about the future is not experienced solely on an individual basis. As one participant explained during an interview, *“When I talk with friends in the community, I realize that I am not the only one going through this. It makes me feel calmer about my future”* (P04). Another participant similarly noted in an FGD session that the community helps normalize future-related worries: *“Here we can talk openly about our fears. When others share similar experiences, it feels less frightening to think about the future”* (FGD2).

Beyond emotional support, the community also serves as a source of shared learning and information. Exchanges of knowledge, life experiences, and coping strategies offer alternative frameworks for interpreting the future. Access to collective knowledge and hopeful narratives contributes to greater self-confidence and an enhanced capacity to perceive the future as more manageable. For instance, one participant described how hearing other members’ experiences provided reassurance: *“Some members have been living with HIV for many years and are still working and living normally. Seeing that makes me believe that my future might also be okay”* (P10). Observational field notes also indicated that community meetings frequently included discussions about treatment adherence, employment strategies, and ways to manage stigma, which collectively fostered a sense of practical hope among members. In this sense, the community strengthens individuals’ adaptive functioning through support, information, and hope, as illustrated on the protective side of Figure 4.

The Community as a Source of Collective Anxiety

The community, while functioning as protective factor, may also become a source of collective anxiety. Intense and repeated social interactions create opportunities for the circulation of narratives concerning risk, uncertainty, and negative future experiences. Recurrent exposure to stories of failure, functional decline, or life uncertainty reinforces

perceptions of the future as fragile and threatening. One participant reflected on this dynamic by stating, *"Sometimes when someone shares about losing their job or getting very sick, it makes me think that the same thing could happen to me in the future"* (P08). During an FGD session, another participant similarly noted that hearing difficult experiences from other members could unintentionally amplify worries: *"When we hear about someone's struggles, it reminds us that our situation is also uncertain"* (FGD1).

The community thus becomes not only a medium through which anxiety is transmitted, but also an object of anxiety itself. Concerns about the sustainability of the community, role stability, and the uncertain future of the group generate anxiety that is collective in nature. In one discussion, a participant expressed concern about the continuity of support structures within the community: *"Sometimes I worry about what will happen if this community stops existing. For many of us, this is the only place where we feel understood"* (P15). Observational notes from community meetings also indicated moments in which discussions about funding, program sustainability, and declining participation generated visible concern among members. In such contexts, individual futures and the future of the community are perceived as intertwined, such that threats to the community amplify future anxiety at the personal level. This dynamic is reflected in the depiction of the community as a source of collective anxiety in Figure 4.

Role Intersection and the Group Anxiety Feedback Loop

The intersection between the protective role of the community and its role as a source of anxiety gives rise to a circular dynamic of future anxiety. Individual experiences of future-related anxiety are brought into community interactions through narratives, complaints, and emotional expressions. These narratives resonate within the group, shaping a particular emotional climate. At the same time, the support and sense of togetherness provided by the community may alleviate anxiety, though not eliminate it entirely. One participant illustrated this ambivalence by stating, *"Talking about our worries together sometimes makes me feel relieved, but at the same time it reminds me that many of us are still struggling with uncertainty"* (P06).

This feedback loop illustrates how future anxiety is continuously shaped through recurring social experiences. Individuals influence group dynamics, and group dynamics in turn influence individual experiences. Within Bronfenbrenner's ecological framework, this process reflects reciprocal interactions between individuals and their immediate social environments, positioning the community as both a site for the formation and management of future anxiety (Christensen, 2016; Eriksson et al., 2018; Shelton, 2018; Vélez-Agosto et al., 2017). Consequently, future anxiety emerges as a psychosocial experience that cannot be understood solely at the individual level, but rather as the product of sustained interactions between individuals and their communities.

Future anxiety develops across levels ranging from the micro-community to the exosystem that encompasses the community. To understand why future anxiety not only emerges but also persists, the findings can be interpreted through Bronfenbrenner's ecological perspective (1977). This perspective conceptualizes individuals as embedded within interacting layers of environmental systems, in which future anxiety is not solely rooted in personal conditions, but is also shaped and maintained by surrounding relational and structural contexts.

At the microsystemic level, close interpersonal interactions, such as relationships with family members, partners, and peers, directly influence how PLHIV interpret the future, particularly when perceived support is limited or insecure. As one participant noted, *“If my family supports me, I feel more hopeful about the future, but when support is uncertain, it makes everything feel more unstable”* (P13). At the mesosystemic level, discontinuities across settings, such as between family, healthcare services, and community organizations, intensify uncertainty regarding the continuity of support. At the exosystemic level, health policies, economic conditions, and social norms and stigma related to HIV indirectly convey persistent messages that the future of PLHIV is fragile and risky. These cross-level interactions help explain why future anxiety among PLHIV tends to be persistent and extends beyond individual-level responses alone.

Profile of Future Anxiety Based on FAS Screening

Quantitative screening using the Future Anxiety Scale (FAS) was conducted to descriptively map the profile of future-related anxiety and to complement the qualitative findings. The FAS was not intended as an outcome evaluation tool or for hypothesis testing, but rather as a supportive instrument to identify prominent levels and dimensions of future anxiety among participants.

Distribution of Future Anxiety Levels.

As shown in Table 4, the majority of participants were classified within the moderate to high levels of future anxiety. The proportion of participants with high levels of anxiety was the largest, while only a small number fell into the low category. This distribution indicates that anxiety about the future was experienced broadly and with relatively high intensity, rather than as a mild or sporadic phenomenon.

Table 4. Distribution of Future Anxiety Levels Based on FAS (n = 31)

Future Anxiety Level	Number of Participants	Percentage
Low	2	6.45%
Moderate	13	41.94%
High	16	51.61%
Total	31	100%

This pattern reinforces the earlier qualitative findings that depicted future anxiety as a dominant psychological experience. The predominance of moderate to high scores suggests that concerns about the future have exceeded adaptive vigilance and begun to form a relatively persistent anxiety pattern.

Dominant Dimensions of Future Anxiety

As presented in Table 5, the dimensions anticipation of future threat and emotional distress about the future emerged as the most dominant aspects, as indicated by the larger number of participants in the high category compared to other dimensions. These findings

suggest that future anxiety is reflected not only in how participants perceive the future as threatening, but also in the intensity of emotional responses accompanying such perceptions.

The dimensions sense of uncontrollability and negative future imagery also showed substantial proportions of moderate to high scores, indicating limited perceived control and the dominance of pessimistic future representations. Furthermore, the impact on current functioning dimension suggests that future anxiety has begun to affect daily functioning, including decision-making and the performance of social roles.

Table 5. Distribution of anxiety levels by FAS dimensions

FAS Dimension	Low	Moderate	High
Anticipation of future threat	0	9	22
Sense of uncontrollability	2	13	16
Negative future imagery	11	6	14
Emotional distress about the future	1	10	20
Impact on current functioning	6	11	14

FAS as Reinforcement of Qualitative Findings

To clarify the integration between quantitative screening and qualitative findings, a mapping was conducted between the dimensions of the Future Anxiety Scale (FAS) and the qualitative themes identified through thematic analysis. This mapping aimed to demonstrate methodological convergence and mutual reinforcement in depicting the dynamics of future anxiety.

Table 6. Synchronization of FAS findings with qualitative themes of future anxiety

FAS Dimension	Quantitative Profile (Score Dominance)	Corresponding Qualitative Theme	Integrative Interpretation
Anticipation of future threat	Majority in high category	Perceiving the future as a domain of threat	The future is construed as a source of multidimensional risk (health, economic, relational), rather than as a space of opportunity
Sense of uncontrollability	Predominantly moderate-high	Lack of control over life direction	Limited perceived agency reinforces uncertainty and helplessness
Negative future imagery	Significant moderate-high proportion	Dominance of negative future imagery	Cognitive representations of the future are dominated by worst-case scenarios and expectations of failure
Emotional distress about the future	High in most participants	Intense emotional distress	Thinking about the future triggers for strong anxiety, tension, and emotional responses
Impact on current functioning	Mostly moderate-high	Impact on daily functioning and social roles	Future anxiety has affected concentration, decision-making, and role effectiveness

Table 6 demonstrates that score patterns across FAS dimensions are closely aligned with the qualitative themes identified. The quantitative prominence of anticipation of future

threat and emotional distress directly corresponds with qualitative findings related to perceiving the future as threatening and experiencing intense emotional distress. Similarly, the dimensions of sense of uncontrollability and negative future imagery reinforce qualitative themes concerning limited agency and pessimistic future representations.

This cross-method convergence indicates that FAS screening not only depicts levels of future anxiety but also confirms the psychological structure of future anxiety identified through thematic analysis. Thus, the integration of quantitative and qualitative data provides a coherent and complementary depiction of future anxiety dynamics among participants.

Contribution of Findings to HIV and Mental Health Research

The findings of this study make a significant conceptual contribution to HIV and mental health research by expanding the psychological focus beyond domains traditionally dominated by depression, general anxiety, stigma, and quality of life. The results demonstrate that future anxiety constitutes a salient and multidimensional psychological experience that is not fully captured within conventional psychopathological frameworks commonly applied in HIV research. Consequently, this study addresses an important gap in the literature by highlighting future-oriented anxiety as a distinct psychological phenomenon within the PLHIV population.

Most prior HIV research has focused on depression and anxiety as responses to diagnosis, stigma, or current life stressors, often framing psychological distress as an emotional reaction to present conditions. The present findings indicate that among PLHIV, psychological distress is rooted not only in present experiences but also in cognitive representations of the future that are perceived as threatening, difficult to control, and uncertain. This future-oriented temporal perspective helps explain why some PLHIV may function adaptively in daily life while simultaneously experiencing persistent anxiety about what lies ahead.

The construct of future anxiety, as conceptualized by Zaleski, offers a more specific framework for understanding these dynamics. Future anxiety emphasizes not merely the intensity of anxiety, but its cognitive content—anticipation of unrealized threats, negative future imagery, and diminished perceptions of control (Beck & Rush, 1985; Eysenck, 2013; Ingram & Kendall, 1987; Zaleski, 1996, 2005). The consistency of these dimensions across both qualitative findings and FAS screening reinforces the relevance of future anxiety as a critical psychological construct in the context of HIV.

A key added value of exploring future anxiety lies in its capacity to integrate multiple psychosocial domains that have often been examined separately. Perceived threats to health, economic uncertainty, relational concerns, and anxiety regarding the sustainability of social roles and community life do not emerge as isolated issues, but are instead unified within a single future-oriented anxiety framework. In this way, future anxiety functions as a conceptual lens that consolidates diverse sources of psychological distress experienced by PLHIV over the long term.

Furthermore, the findings underscore that future anxiety is not solely an individual phenomenon, but is shaped through social and ecological dynamics. Within Bronfenbrenner's ecological model, future anxiety is influenced by interactions between individuals and their immediate social environments, particularly communities (Eriksson et al., 2018; Shelton, 2018; Vélez-Agosto et al., 2017). The ambivalent role of the community revealed in this study

demonstrates that social environments traditionally viewed as protective may also function as sources of collective anxiety through the circulation of risk and uncertainty narratives. This perspective enriches HIV mental health research by showing that psychological distress is produced not only by external stigma or medical conditions, but also by complex relational dynamics within support systems.

Conceptually, these findings encourage a shift from approaches focused primarily on symptom reduction toward more contextual and future-oriented understandings of psychological well-being. By identifying future anxiety as a central issue, this study opens avenues for psychosocial interventions that extend beyond alleviating current distress to supporting PLHIV in constructing more realistic, controllable, and meaningful future narratives. Within the field of HIV and mental health research, the exploration of future anxiety thus provides an additional and relevant framework for understanding the psychological challenges of living with HIV as a lifelong chronic condition.

Practical Implications

The findings of this study have practical implications for the development of mental health services for People Living with HIV (PLHIV), particularly in the context of psychological assessment and community-based intervention approaches. By identifying future anxiety as a dominant, multidimensional psychological experience shaped by social dynamics, this study underscores the need for more contextualized and long-term-oriented approaches to supporting the psychological well-being of PLHIV. The implications outlined below focus on how these findings can be translated into assessment and support practices that are more sensitive to the lived experience of HIV as a chronic condition.

Implications for Psychological Assessment among PLHIV

The findings carry important implications for psychological assessment practices among PLHIV. The results indicate that the anxiety experienced by participants may not be optimally identified through assessments that focus solely on depression or general anxiety. Future anxiety emerges as a distinct, future-oriented form of anxiety that is integrated with perceptions of long-term threat, a sense of uncontrollability, and negative future imagery. Accordingly, psychological assessment for PLHIV should incorporate future-oriented temporal perspectives as a key component of psychological profiling.

Assessment approaches that combine in-depth qualitative exploration with supportive quantitative screening, as applied in this study, allow for a more comprehensive understanding of the psychological dynamics of PLHIV. Qualitative assessment provides space for individuals to articulate the subjective meanings and social contexts of future-related anxiety, while instruments such as the FAS assist in mapping the intensity and dimensions of anxiety in a more structured manner. The integration of these approaches is relevant for both clinical practice and community-based psychosocial services.

Relevance of Community-Based Approaches

The findings also highlight the relevance of community-based approaches in supporting the mental health of PLHIV. Communities were shown to play a dual role, functioning both

as sources of emotional support and information and as spaces in which collective anxiety may develop. Understanding this ambivalent role is essential to ensure that community-based interventions not only strengthen support systems but also actively manage group dynamics that may reinforce future-related anxiety.

Community approaches that are sensitive to the dynamics of future anxiety may represent an effective strategy for enhancing the psychological well-being of PLHIV. Interventions focused on psychoeducation regarding future-related anxiety, the strengthening of adaptive coping skills, and the facilitation of more balanced future narratives may help communities function more optimally as protective factors. In this way, communities become not only spaces for sharing experiences, but also arenas for strengthening agency and fostering realistic hope for the future.

Implications for System and Policy Management in PLHIV Communities

The findings further indicate that future anxiety among PLHIV is not solely derived from intrapersonal dynamics or community interactions, but is also maintained by broader systemic contexts. When individuals and communities exist within structural conditions that fail to provide life certainty – such as limited access to employment, economic insecurity, and weak social protection – future-related anxiety is likely to become trapped within a recurring psychosocial cycle. In such circumstances, communities may function as spaces for sharing distress without possessing sufficient structural resources to alter the objective conditions underlying that anxiety, thereby allowing future anxiety to be collectively reproduced.

These findings underscore the importance of system- and policy-level interventions in the management of PLHIV communities. Public policies, legal frameworks, and social programs that ensure the protection of PLHIV's rights, particularly in relation to access to decent employment, education, and stigma-free public services, have the potential to function as structural protective factors that strengthen perceptions of control and future-oriented hope. In addition, community-based educational programs aimed at reducing social stigma may help create safer and more inclusive environments. With such systemic support, communities can function not only as spaces for psychological survival but also as bridges toward more sustainable social integration, enabling PLHIV to view the future as something that can still be planned rather than merely as a source of threat.

Study Limitations

Several limitations of this study should be considered when interpreting the findings. First, the research was conducted within a specific community context, meaning that the psychological dynamics identified are strongly influenced by the social, cultural, and structural characteristics within the community. Although the findings provide in-depth insight into future anxiety within this context, caution is needed when generalizing to other PLHIV communities with different characteristics.

Second, the use of the Future Anxiety Scale (FAS) in this study was intended as a supportive screening tool rather than as a diagnostic instrument or a measure of change. The FAS was used to complement and reinforce qualitative findings; therefore, the quantitative results are not utilized to support causal or inferential conclusions. Careful consideration is

needed, particularly if the findings are used as a basis for developing interventions or for future evaluative research.

The last limitation relates to the qualitative emphasis of the research approach, which means that the findings rely heavily on the depth of the data and the interpretations made during analysis. Although methodological triangulation was used to enhance credibility, the potential for subjective bias in data collection and analysis cannot be fully eliminated.

4. CONCLUSION

This study demonstrates that future anxiety is a significant psychological experience among people living with HIV (PLHIV), characterized by perceptions of the future as threatening, a reduced sense of control over life direction, negative future imagery, and disruptions in daily functioning and social roles. The findings also indicate that future anxiety is shaped not only by individual cognitive and emotional processes but also by community dynamics, where social interactions can serve both as sources of support and as contexts in which anxiety is collectively reinforced. These results emphasize the importance of recognizing future anxiety as a key dimension of the psychological experience of living with HIV as a chronic condition. In practical terms, the findings suggest that psychosocial interventions for PLHIV should incorporate strategies that address future-oriented concerns, including strengthening perceived control, supporting adaptive future planning, and leveraging community-based support systems to reduce uncertainty and promote more positive and constructive views of the future.

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