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ORIGINAL RESEARCH

Unlocking the Keys to Swift HIV Treatment: A Qualitative Exploration of Rapid Antiretroviral Therapy Initiation Among People Living with HIV in China

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Background: Rapid initiation of antiretroviral therapy (ART) is beneficial for people living with HIV (PLWH) to achieve the virological suppression and decrease the risk of HIV transmission. However, the implementation of rapid ART varies across the world.

Objective: This study aims to understand the influencing factors of rapid start of ART in PLWH in Liangshan Prefecture, where the HIV epidemic is severe and is a key area for HIV prevention and control in China, to provide information for making effective interventions in China and elsewhere.

Methods: A phenomenological study with semi-structured in-depth interviews was conducted in Liangshan Prefecture, Sichuan Province, China, from April 2024 to May 2024. Data were analyzed by using the Colaizzi's seven-step method.

Results: Participants (n = 27) aged 14–55 were interviewed (14 males and 13 females). Participants initiated ART at a median time of 29 days. 15 participants initiated ART within 30 days of HIV diagnosis, but no one initiated ART within seven days of HIV diagnosis. Three themes and nine sub-themes affecting the rapid start of ART were identified: capacity factors (physical condition, disease knowledge, psychological resilience); opportunity factors (affordability of medicines, policy timeliness, diagnosis disclosure and social support, attitudes of healthcare workers); and motivation factors (family roles, benefit perception of ART).

Conclusion: Influencing factors affecting the rapid initiation of ART in PLWH were complex. Healthcare providers should strengthen the knowledge education from the perspective of PLWH, pay more attention to the psychological changes after they are diagnosed with HIV infection, improve their social support network, alleviate their treatment burden, help them make scientific decisions, and promote the implementation of rapid initiation of ART.

Keywords: people living with HIV, rapid antiretroviral therapy, phenomenology

Introduction

Nowadays, HIV infection remains one of the major global public health problems over the world. To end the AIDS epidemic by 2030, the United Nations General Assembly adopted the Political Declaration on HIV/AIDS in 2021, which committed itself to achieving the 95–95-95 targets by 2030, which are 95% of HIV-positive persons would be diagnosed, 95% of those diagnosed would have access to antiretroviral therapy (ART), and 95% of those treated would have the virus suppressed.[1] Rapid initiation of ART is an important link in achieving the 95–95-95 targets. Studies have shown that starting ART early is beneficial for people living with HIV (PLWH) to enhance treatment success, shorten the time it

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takes to achieve the virological suppression, lower disease mortality rates, reduce the risk of HIV transmission, and effectively promote AIDS prevention and control.[2–5]

The rapid initiation of ART policy has been progressively promoted worldwide. The World Health Organization (WHO) recommends that PLWH should start ART within 7 days after confirmation, and preferably on the same day of diagnosis.[6] The International Antiviral Society-USA recommended PLWH to start ART as soon as possible following diagnosis, ideally within 7 days, including on the same day of diagnosis or on the first visit.[7] The guidelines of the European AIDS Clinical Society (EACS) and the British HIV Association (BHIVA) indicate that PLWH should start ART immediately upon receiving a diagnosis.[8,9] In China, the 2023 edition of the National Manual of Free Antiretroviral Treatment for AIDS explicitly proposed that HIV-positive people should initiate ART within 30 days of diagnosis. Additionally, those who with HIV related progressive diseases should start treatment within 7 days of diagnosis.[10] The China AIDS Treatment Guidelines (2024 Edition) recommend that ART should be initiated as early as possible for all HIV infections, with rapid initiation of ART (within 7 days of diagnosis) or on the same day of diagnosis recommended for patients with the condition.[11]

Although the importance of rapid initiation of ART has been recognized worldwide, its implementation is hampered by many factors, including discrimination, treatment burden, lack of trust in medical care, and low levels of health care.[12,13] A retrospective observational study in Italy found that the median time for initiating ART of PLWH from January 2016 to June 2021 was 34 days.[14] A cross-sectional study in Ethiopia from December 2018 to July 2019 showed that the rate of ART initiation on the same day of diagnosis was 41.9% among PLWH.[15] A prospective cohort study in South Africa showed that between September 2016 and May 2018, 36% of PLWH started ART on the date of confirmation.[16] A retrospective cohort study discovered the median time for newly diagnosed PLWH to initiate ART in China from 2016 to 2020 was 24 days.[17] The National Center for AIDS/STD Control and Prevention, Chinese Center for Disease Control and Prevention indicated that the rate of ART initiation within 30 days of HIV diagnosis for newly diagnosed PLWH in China was 70.1% in 2022, but there is still a gap compared with the goal of striving to achieve 80% by 2025.[18] The HIV epidemic is severe in Liangshan Prefecture, Sichuan Province, and is a key area for HIV prevention and control in China.[19] A retrospective study reported that by the end of 2019, the rate of initiation of ART within 30 days of HIV diagnosis for PLWH in Liangshan Prefecture was only 12.69%.[20] Currently, the studies on the determinants of the rapid ART initiation in China primarily focus on the analysis of case reports or follow-up quantitative data, with few studies on the feelings, experiences and subjective perceptions of PLWH.[21–23]

The COM-B model (Capability, Opportunity, Motivation-Behavior, COM-B) was proposed by Michie et al[24] in 2011 and believes that individual behavior is the result of the combination of the three factors of ability, opportunity, and motivation. Capacity is the patient's physical and mental state and the corresponding abilities to participate in behavior change, opportunity refers to all the outside forces that spur someone to act, and motivation is the sum of all the brain processes that inspire and guide behavior.[24] The COM-B model is now widely used in the field of health promotion and disease prevention.[25–27] Therefore, by using the COM-B model to both structure the interview outline and analyze the data, the aim of this study was to better understand and characterize the factors that contribute to the rapid start of ART in PLWH.

Materials and Methods

Study Setting and Participants

This study was a single-center study using a phenomenological research methodology. We conducted in-depth interviews with PLWH in a hospital in Liangshan Prefecture, Sichuan Province, China, from April 2024 to May 2024, to explore the influencing factors affecting rapid initiation of ART in PLWH.

Inclusion criteria: 1) confirmed with HIV infection or AIDS patients; 2) able to understand and express themselves clearly in Chinese; 3) initiated ART; and 4) informed consent and voluntary participation in the study. Exclusion criteria: HIV combined with severe infection or severe organic diseases such as heart, brain, lung, etc. This study was approved by the Ethics Committee of the Affiliated Hospital of Southwest Medical University (Number: KY2024044).

The Interview's Outline

Guided by the COM-B model, an interview outline was designed based on literature research and the research purpose. It was modified through pre-interviews with two interviewees (Supplementary File 1). The interview outline included participants' perceptions of the new HIV diagnosis, barriers and facilitators to accessing rapid ART, and goals for accessing ART, etc.

Data Collection

A purposive sampling strategy was used to select participants for the study. The phenomenological research approach was used to conduct semi-structured, individual interviews to investigate the subjective perspectives of PLWH with reference to the rapid ART. Researchers were trained with the interview, including qualitative methods and interviewing techniques. The interview was conducted in a single ward or outpatient reception room to ensure the privacy of the interview. The interview time was 30 to 60 minutes. The purpose of the interview was disclosed to them before the interview to gain their cooperation and trust. Throughout the interview, the researchers did not make any assessments, but encouraged the PLWH to share their true feelings and opinions. At the same time, information such as expression, tone of voice, and movement were observed to obtain the respondents' real thoughts and feelings. After obtaining informed consent, the entire interview process was audio-recorded. Data saturation was defined as the absence of new data as the data collection process progressed.

Data Analysis

After the interview, two researchers transcribed the interview recordings and notes completely and compiled them into written records within 24 hours. Data were analyzed by Colaizzi's seven-step method.[28] The interview data was carefully and repeatedly read, meaningful statements were extracted, recurring ideas were coded, the coded ideas were assembled, the content of the assembled ideas was described in detail, similar ideas were categorized and summarized, the themes were sublimated, and finally the analyses were returned to the research participants for validation.

Results

Participants (n = 27) aged 14–55 were interviewed (14 males and 13 females). Most participants belonged to the Yi nationality (n = 23, 85%). The literacy level was mainly primary school or illiterate (n = 21, 78%). The manner of infection was predominantly sexually transmitted (n = 16, 59%). Participants initiated ART at a median time of 29 days. 15 participants initiated ART within 30 days of HIV diagnosis, but no one initiated ART within seven days of HIV diagnosis (Table 1).

Factors Affecting Rapid Initiation of ART

After in-depth analysis of the interview data, 18 codes were extracted; then, nine sub-themes were formed. Finally, three themes were summarized and extracted, including capacity factors, opportunity factors, and motivation factors (Table 2).

Theme 1—Capacity Factors

Physical Condition

Some PLWH may not have any physical symptoms when they were first diagnosed and felt that they were in good physical condition. As a result, they wrongly believed that they did not need ART (n=2). A minority of respondents even worried that antiretroviral drugs would harm their physical health and were unwilling to receive treatment (n=1).

> I didn't feel any discomfort with this disease, I used to think whether it's the same I take medicines or not. (N24)

> If you took pills every day, without exception, it may not be beneficial for your body. (N27)

On the contrary, some PLWH have already developed varying degrees of physical symptoms when they were diagnosed, and their perception of the threat of the disease was stronger (n=2). Which prompted them to start ART as soon as possible to alleviate or eliminate symptoms and delay the progression of AIDS.

Table 1 Participant Demographics

Number	Gender	Age-ranges*	Ethnicity	Literacy Level	Profession	Marital	Transmission	Diagnosis Time	Treatment time	Reasons for Inspection
N1	Male	25–49	Yi nationality	Primary school	Farmer	Divorced	Sexual transmission	19-May-2023	6-Jun-2023	Health census
N2	Male	25–49	Yi nationality	Middle school	Farmer	Married	Sexual transmission	19-Feb-2023	28-Feb-2023	Hospitalization
N3	Male	50–55	Yi nationality	Primary school	Farmer	Married	Blood borne	3-Jun-2019	21-Jun-2019	Health census
N4	Male	25–49	Han nationality	Primary school	Farmer	Married	Sexual transmission	7-Dec-2023	4-Jan-2024	Health census
N5	Female	50–55	Yi nationality	Illiteracy	Farmer	Married	Sexual transmission	18-Mar-2018	29-Jun-2018	Health census
N6	Male	25–49	Yi nationality	Illiteracy	Farmer	Married	Sexual transmission	12-Sep-2007	7-Apr-2009	Health census
N7	Male	25–49	Yi nationality	Primary school	Farmer	Single	Blood borne	16-Feb-2012	10-Dec-2018	Health census
N8	Female	25–49	Yi nationality	Illiteracy	Farmer	Married	Blood borne	4-Jul-2019	26-Jul-2019	Partner positive
N9	Male	25–49	Yi nationality	Middle school	Unemployment	Married	Sexual transmission	10-Jan-2019	16-Apr-2019	Health census
N10	Female	25–49	Yi nationality	Illiteracy	Unemployment	Married	Sexual transmission	9-Jun-2014	11-Sep-2017	Prenatal examination
N11	Male	25–49	Yi nationality	Middle school	Farmer	Married	Sexual transmission	11-Nov-2021	19-Nov-2021	Health census
N12	Male	25–49	Han nationality	Illiteracy	Worker	Single	Sexual transmission	6-Dec-2021	15-Dec-2021	Hospitalization
N13	Female	10–24	Yi nationality	Primary school	Student	Single	Unknown	22-Nov-2016	11-Dec-2016	Health census
N14	Female	10–24	Yi nationality	Middle school	Student	Single	Unknown	13-Apr-2017	9-May-2017	Health census
N15	Female	25–49	Yi nationality	Primary school	Farmer	Married	Sexual transmission	19-Nov-2020	30-Nov-2020	Prenatal examination
N16	Male	25–49	Yi nationality	Primary school	Farmer	Married	Unknown	7-Sep-2018	6-Oct-2018	Health census
N17	Male	25–49	Yi nationality	Illiteracy	Farmer	Married	Blood borne	9-Nov-2018	28-Nov-2018	Health census
N18	Female	25–49	Tibetan	Illiteracy	Farmer	Married	Sexual transmission	28-Nov-2018	11-Dec-2018	Health census
N19	Female	25–49	Yi nationality	Illiteracy	Worker	Married	Blood borne	13-Nov-2014	21-Jan-2015	Prenatal examination
N20	Female	25–49	Yi nationality	Illiteracy	Farmer	Widowed	Sexual transmission	26-Mar-2014	15-Dec-2017	Prenatal examination
N21	Female	50–55	Yi nationality	Illiteracy	Worker	Married	Blood borne	3-Nov-2017	29-Nov-2017	Hospitalization
N22	Male	25–49	Han nationality	Primary school	Worker	Single	Sexual transmission	12-Mar-2018	29-May-2018	Health census
N23	Female	25–49	Yi nationality	Illiteracy	Worker	Married	Blood borne	20-Jul-2015	15-Jul-2017	Health census
N24	Female	25–49	Yi nationality	Illiteracy	Worker	Married	Sexual transmission	24-Sep-2012	28-Aug-2015	Prenatal examination
N25	Female	25–49	Yi nationality	Middle school	Farmer	Widowed	Sexual transmission	30-Aug-2022	28-Sep-2022	Health census
N26	Male	25–49	Yi nationality	Illiteracy	Worker	Married	Sexual transmission	19-Aug-2010	29-Jul-2011	Prenatal examination
N27	Male	25–49	Yi nationality	High school	Worker	Divorced	Blood borne	18-Nov-2017	25-Jul-2018	Health census

Notes: *Providing ages as age-ranges to protect participant's privacy better.

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Table 2 The Influencing Factors of Rapid Initiation of ART

Encoding	Number (%)	Sub-Themes	Theme
① I was willing to take medicine as I felt uncomfortable (N12,N16) ② Whether I took pills or not was the same. (N9,N24) ③ If you took pills every day, without exception, it may not be beneficial for your body.(N27)	5(19%)	Physical condition	Capacity
① I knew it was beneficial for me to be given the medicine.(N2,N3,N21) ② I used to think whether it's the same I take medicines or not. (N9,N24,N27)	6(22%)	Disease knowledge	
① I was not even sure I had it at that time.(N9) ② I could not believe it before. (N10,N20,N26)	4(15%)	Psychological resilience	
① Everything was free, including medications. Raising three children would be more difficult for me if they were not free. (N8,N25) ② The government provides me with several hundred CNY in monthly subsidies. (N14,N15,N17)	5(19%)	Affordability of medicines	Opportunity
① I told her (wife) first. She encouraged me and advised me to take the medicine. (N3,N11,N15,N16, N18) ② My mother told me I was living with HIV. She asked me to take medication, assuring me that it would be able to manage the condition well. (N13,N14) ③ She (peer) said it will be okay when you take the medicine. She provided me with solace. (N25) ④ My reputation would suffer if people knew that I have AIDS. (N5)	9(33%)	Diagnostic disclosure and social support	
① These doctors were good, and contacted me many times to inquire about my health. (N1,N3,N4, N11,N18,N25)	6(22%)	Attitudes of healthcare workers	
① I was diagnosed with HIV infection in 2007. At that time, the condition was different from what it is today.(N6,N23)	2(7%)	Policies timeliness	
① I had no desire to continue living at that time. But when I thought of my parents, wife, and children were relying on me, it compelled me to persevere. (N4,N11,N12,N16,N25) ② I aimed to manage my health, manage the virus, and avoid spreading it to anyone in my family. (N3, N8,N11,N15)	8(30%)	Family roles	Motivation
① The medications were undoubtedly effective, I believed it. It would be better if the medicines could cure AIDS. (N1,N2,N3,N4,N13,N15,N16,N17,N18,N21,N25)	11(41%)	Benefit perception of ART	

About half a month after I was diagnosed, I started taking medicine.I was willing to take medicine as I felt uncomfortable (N12)

Disease Knowledge

Several participants acquired knowledge about AIDS from healthcare professionals, family members, and various sources. They acknowledged the significance of obtaining ART and expressed their readiness to commence treatment promptly (n=3).

As the doctor told me, I knew it was beneficial for me to be given the medicine. (N2)

I was told to take this medication by the doctor over the phone. According to him, taking this treatment on time ensures its continued efficacy and prevents the virus from spreading further. (N3)

I read books, because I have never had HIV before, but some people have had it, and they also talked about treatment. So I knew that I must take this medicine. (N21)

However, some respondents lacked a correct understanding of the disease and their health status in the early stages of diagnosis and were unwilling to receive treatment (n=3).

I didn't feel any discomfort with this disease, I used to think whether it's the same I take medicines or not (N24)

If you took pills every day, without exception, it may not be beneficial for your body (N27)

Psychological Resilience

Some respondents had low levels of psychological resilience and were unable to adapt to the stress and trauma of being diagnosed with HIV infection, so they chose denial, avoidance and other means to cope with the disease (n=4).

I was not even sure I had it at that time. After multiple examinations, the doctor confirmed that I do indeed have it. (N9)

I had four or five HIV tests at several locations and then I believed that I was infected. (N20)

Theme 2—Opportunity Factors

Affordability of Medicines

Two interviewees have reported that providing free testing and ART medications has improved treatment accessibility and alleviated their financial worries (n=2).

Everything was free, including medications. Raising three children would be more difficult for me if they were not free. My husband went out to work, and feeding the children required money. (N8)

The doctor advised me to treat the condition, I should do so. It was better to have free medication. The country is definitely doing this for my health, it won't harm me. With this knowledge, I embraced it quickly. (N25)

Additionally, the government's provision of financial subsidies to PLWH who were facing financial hardships, which helped reduce their financial burden and enhance their willingness to receive treatment (n=3).

The government provides me with several hundred CNY in monthly subsidies. (N15)

They assisted me with the subsidy. After the diagnosis, I received 300 CNY in financial aid each month. (N17)

Diagnostic Disclosure and Social Support

The family is an important component of the social support system for PLWH. Adolescent interviewees received confirmation of their diagnosis from their families, who offered psychological support to lessen their mental burden (n=2).

My mother told me I was living with HIV. She asked me to take medication, assuring me that it would be able to manage the condition well. (N13)

To lessen their own post-diagnosis mental anguish and get emotional support, some PLWH made the proactive decision to tell their parents, partners, and other close relationships about their diagnosis (n=5).

I told her (wife) first. She encouraged me and advised me to take the medicine. (N11)

My husband knew that I was infected with HIV, and his concern for me hasn't changed. He also advised me to get into therapy. (N15)

Furthermore, peer support was beneficial in helping PLWH to alleviate anxiety and tension, as well as enhancing their self-confidence and resilience in coping with the disease (n=1).

I asked what should I do, and she (peer) said it will be okay when you take the medicine. She provided me with solace. (N25)

On the other hand, PLWH were a little reluctant to start ART due to concerning about unintentionally revealing their condition to others during the treatment procedure (n=1).

My reputation would suffer if people knew that I have AIDS. If people knew that I took ART medication, the word would be spread, and it would affect me badly, and negatively impact my three daughters who were not married yet. (N5)

Attitudes of Healthcare Workers

When PLWH was newly diagnosed, healthcare workers typically first knew the confirmation results. In the process of communication with PLWH, care and respect for PLWH were conducive to fostering their active cooperation with treatment and increasing their trust in healthcare workers (n=6).

I was told to take this medication by the doctor over the phone. According to him, taking this treatment on time ensures its continued efficacy and prevents the virus from spreading further. These doctors were good, and contacted me many times to inquire about my health. (N3)

This doctor was really kind to me. He urged me to bring my child here for an HIV test. He was also quite reasonable and showed a lot of concern for me. He told me to treat it, then I did. (N25)

Policy Timeliness

In 2016, China began to implement the treatment standard that "all HIV/AIDS patients, regardless of their CD4 cell levels, should receive ART treatment." Some interviewees were hindered in their ability to start ART rapidly due to the existing policies at the time (n=2).

I was diagnosed with HIV infection in 2007. At that time, the condition was different from what it is today. During that period, the eligibility criteria for using this antiretroviral drug was a CD4 level below 250. (N6)

I was going to complete my sentence at that time. It would take three months for the paperwork to come through before I can get medication. I felt it was unnecessary. (N23)

Theme 3—Motivation Factors

Family Roles

Due to the family roles they played, the respondents believed that they were needed by their families and were willing to receive treatment as soon as possible in order to return to their families quickly (n=5).

I had no desire to continue living at that time. But when I thought of my parents, wife, and children were relying on me, it compelled me to persevere. (N11)

I needed to support my elderly mother. My children were also too young. I was under excessive stress. I need to take ART medication to safeguard my physical well-being. (N16)

Besides, out of a sense of responsibility towards their families, the respondents were willing to receive treatment as soon as possible to control viral load and avoid HIV transmission (n=4).

It was claimed that taking these medications would treat the illness and prevent children from contracting it. I took these medications with the intention of protecting my children. (N8)

I aimed to manage my health, manage the virus, and avoid spreading it to anyone in my family. (N11)

Benefit Perception of ART

It's worth noting that nearly half of the participants expected that ART would achieve viral suppression or potentially even a complete cure (n=11).

The medications were undoubtedly effective, I believed it. It would be better if the medicines could cure AIDS. (N4)

She (mom) advised me to take medication, assuring me that it would be able to manage the condition well. (N13)

It would be better if the therapy could cure AIDS, but if not, there was nothing to do. At least it was enough to control the virus. (N15)

Discussion

In this study, using the COM-B model as a framework, we conducted qualitative interviews to investigate the factors that influence the rapid initiation of ART in PLWH. Capacity factors, such as physical condition, disease knowledge, and psychological resilience, directly influenced the prompt initiation of ART for PLWH. First, the majority of PLWH in Liangshan Prefecture are illiterate or only completed elementary school,[29] and most Liangshan Yi settlements are situated in mountainous, remote, and information-blockage areas,[30] which makes it difficult for them to acquire, comprehend, and apply AIDS-related knowledge. Particularly in cases where there are no observable physical symptoms, there is a higher probability of the PLWH lacking a proper understanding of the significance of starting ART rapidly, resulting in decision

conflicts or delays in decision-making. This suggested that we should specifically combine the educational level and ethnic characteristics of the PLWH in health education. In addition to the existing publicity posters, village radio or movies, and household propaganda,[31] we can also incorporate game interaction,[32] situational role-playing,[33] and other methods to enhance the form of health education, and assist the PLWH in objectively viewing and coping with the disease. Second, the diagnosis of HIV as an extremely stressful experience, leading to a variety of stressors for PLWH.[34] One of the reasons for therapy delays is that PLWH have low levels of psychological elasticity, poor adaptability to stress, and inadequate responsiveness. With the use of group intervention,[35] cognitive behavioral therapy,[36] and other methods, healthcare professionals can help PLWH better manage their illnesses and increase their psychological resilience.

Opportunity factors such as the affordability of medicines, policy timeliness, the disclosure of diagnoses and social support, and the attitudes of health workers all played a critical role in influencing the rapid initiation of ART for PLWH. A study discovered that the financial burden of therapy frequently led to the delay or interruption of ART among PLWH with poor economic conditions.[13] The government offers free antiretroviral medications to PLWH, and PLWH with economic troubles could receive financial subsidy. These measures relieved their medical burden, alleviated their financial stress, and helped PLWH receive ART rapidly. However, there remain over 40,000 PLWH in Liangshan Prefecture, with 20.89% of these cases being mobile HIV/AIDS,[37,38] which is very mobile and makes managing AIDS patients difficult. Therefore, there is a need to intensify the promotion to the floating population. At the same time, communication with places of inflow has been strengthened, and referrals of itinerant persons have been made to reduce the difficulty of missing visits and management.

We found that disclosing the diagnosis in a suitable manner has positive effects on enhancing the social support of PLWH, acquiring assistance, and alleviating psychological stress. However, AIDS-related stigma is a major barrier to disclosure of HIV diagnosis.[39] Hence, it is crucial to actively advocate for a shift in societal beliefs and eradicate the AIDS-related stigma. Furthermore, it is important to assist PLWH in finding appropriate methods and platforms to disclose their diagnosis, and to encourage them to receive more social support. In addition, peer support plays an important role in providing social support for PLWH. It allows PLWH to obtain a deeper understanding of others' experiences, explore new ways of interacting with others, and get supported while engaging in conversations with their peers. It is recommended to strengthen peer support team training, guarantee service quality, and improve the social support networks of PLWH.

Furthermore, when medical and healthcare workers respect and care for PLWH, it is conducive to establishing a good doctor-PLWH relationship, enhancing their trust in doctors, strengthening communication and interaction between doctors and PLWH, and thus improving PLWH's in-depth understanding of AIDS-related knowledge. Therefore, while medical and healthcare workers are gaining a more scientific and comprehensive understanding of the rapid initiation of ART, they should also pay attention to strengthening their professional ethics, improving their professional qualities, respecting and caring for PLWH, and providing professional support, establishing a harmonious and trusting doctor-PLWH relationship, and promoting the rapid initiation of ART.

The findings of this study indicated that PLWH's perception of the benefits of ART is the primary motivation for HIV treatment. Nevertheless, HIV infection is presently untreatable, continues to present a significant danger to the life of the PLWH. It is prone to generating pessimistic treatment prospects, leading PLWH to employ denial and avoidance as a means of dealing with it. Thus, while conducting health education, healthcare workers should pay attention to their psychological condition, guide their rationality in the face of disease, and correctly respond to the disease. Moreover, the role of the family and the sense of family responsibility are strong drivers for PLWH in Liangshan Prefecture to start ART rapidly. PLWH in Liangshan Prefecture are predominantly young and middle-aged,[40] with heavy family responsibilities and burdens. Therefore they want to rapidly start ART to control the virus then they can return to their families and society.

Liangshan Prefecture is characterized by a high incidence of the HIV infection and a concentration of ethnic minority settlements. Our study lacked representation of the prefecture's overall circumstances, had a relatively small sample size, and research was restricted to one county in Liangshan Prefecture, which has geographical variations in the HIV epidemic. It should be noted that the conclusions of this study may vary across different regions. Therefore, the regional

scope of the study could be expanded in the future to reduce disparities. Furthermore, the qualitative data was obtained from PLWH's memories of their experience with the rapid ART. It is worth noting that some of the interviewees were diagnosed long time ago, which could have led to a bias in their memories.

Conclusion

Three themes and nine sub-themes related to competence, opportunity, and motivation influenced the rapid initiation of ART. It is recommended that healthcare workers should strengthen health education from a PLWH's perspective, pay attention to psychological changes after diagnosis, and improve PLWH's social support networks. What's more, healthcare workers should focus on relieving the burden of treatment, encouraging PLWH to rapidly start ART, improving the timeliness and effectiveness of ART, and improving the quality of life of PLWH.

Data Sharing Statement

The datasets generated and analyzed during the current study are not publicly available due to the principle of confidentiality but are available from the corresponding author on reasonable request.

Ethics Approval and Informed Consent

The study was approved by the ethics committee of Affiliated Hospital of Southwest Medical University in January 2024 (Number: KY2024044), and the study was conducted in accordance with the Declaration of Helsinki. Informed consent was obtained from all participants in the study, which included the publication of the anonymous responses and direct quotations. Minors were agreed by themselves and their guardians to sign informed consent forms, and verbal consent was obtained from other subjects. The verbal consent was approved by the ethics committee of Affiliated Hospital of Southwest Medical University.

Consent for Publication

All authors approved the final manuscript as submitted.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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Disclosure

The authors declare that they have no competing interests.

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