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Factors Influencing Adherence to Antiretroviral Treatment in Woman Living with HIV during Pregnancy and Puerperium: A Narrative Synthesis

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Abstract

Scientific progress has resulted in the emergence and improvement of antiretroviral therapy (ART), with significant reductions in viral load rates in people living with HIV. Concerning gender, women and girls exhibit lower rates (compared to men and boys) of diagnosis, engagement with healthcare services, retention in care, adherence to ART, and achievement of viral load suppression. Hence, it becomes imperative to investigate their specific needs, particularly motherhood-related ones. This narrative synthesis and systematizes knowledge, using qualitative or mixed methodology on motherhood and ART in women living with HIV, aiming to gather and present information on an under-researched subject. A search for descriptors in the databases PubMed, Embase, LILACS, CINAHL, Web of Science, and Scopus identified 1429 articles that, after selection, generated 14 for analysis. Most participants had difficulty adhering to ART and were in the postpartum period during the studies. Among the individual, social, and care factors raised for adherence, reports on adverse side effects, motivation, perceptions of drug efficacy, breastfeeding, food insecurity, stigma, and emotional support stand out. Coping strategies, access to information, and building bonds are evidence of the need for better adherence rates.

Keywords: Antiretroviral Agents, Medication Adherence, HIV, Pregnancy, Postpartum Period

List of Abbreviations

AIDS - Acquired Immunodeficiency Syndrome; ART – Antiretroviral; CD4 - Cluster of Differentation; PLWHA - People Living with HIV/AIDS; UNAIDS - The Joint United Nations Programme on HIV/AIDS; VT – Vertical Transmission

Introduction

Numerous technical-scientific advances, especially regarding antiretroviral technologies (ART), have allowed the prognosis of those infected by the virus to transform from rapid and inevitable illness to a life expectancy similar to that of people living without the virus [1]. Continuous treatment prevents opportunistic infections in people already diagnosed and the appearance of new HIV infections, either by sexual, vertical, or horizontal transmission.

The increase in infection among women raises concerns about vertical transmission (VT). Official documents highlight low HIV VT rates – below 1% – among pregnant women using antiretroviral drugs who maintain a viral load below 1,000 copies/mL [2]. Such pregnant women need to be attentive to specific measures, such as maintaining good adherence to ART during pregnancy, avoiding teratogenic medications, and initiating antiretroviral drug administration to the newborn ideally on the first day of life, with continuation for at least four weeks [3]. Moreover, care related to labor and the prevention of vertical transmission is necessary, especially in the last weeks of pregnancy and breastfeeding [4].

While these clinical measures are essential, they cannot be fully understood without examining the psychosocial challenges faced by women living with HIV. Regarding the poor retention of services and limited adherence to medication treatment, the puerperium and postpartum periods are critical, and the probable causes for this finding are the relationship between these periods and irregular sleep, a low emotional support network, and social and family support and diagnosis of depression [5].

According to the literature, for women living with HIV, motherhood is a particularly significant experience associated with various factors. Studies suggest that pregnancy in this context can lead to life changes and positively influence treatment adherence. It also raises concerns about transmission to offspring/partner, fear of disclosing the diagnosis, and uncertainties about the future [6-10]. This demonstrates how psychosocial aspects intertwine with clinical outcomes, reinforcing the need for integrated approaches.

Machado et al. [7] highlight differences among women diagnosed during or after childbirth, those living with HIV during their first pregnancy, and those in subsequent pregnancies. Detecting the virus during pregnancy can lead to fear and insecurity due to the possibility of transmitting it to the baby, especially if the treatment is not started immediately after diagnosis. However, women who have already been pregnant beforehand tend to be less concerned about vertical viral transmission due to previous experience and piled-up knowledge.

Beyond individual experiences, reproductive behavior and choices also reveal systemic challenges.. Studies indicate a tendency to discuss the matter with counselors or peer specialists (individuals who also live with HIV and serve as counselors), primarily due to concerns about disturbing or stressing their doctors, leading to ambulatory follow-up loss in many cases [11]. Additionally, when deciding on the location for childbirth, some prefer to give birth in distant cities because of concerns about forced abortions and distrust of the treatment they may receive [12].

The issues arising after pregnancy are often experienced in solitude by women as a result of their fear of the reaction from those close to them regarding their HIV status and pregnancy. Even among healthcare professionals, dialogues may be influenced by prejudice, resulting in silence and a lack of crucial information for treatment [7].

Additionally, providing technical and theoretical support to healthcare professionals is crucial to addressing current needs and delivering safe medical care and assistance to this population [13-14].

The 2021 Policy Statement and the Global AIDS Strategy set ambitious goals related to VT Prevention for 2025. That is: 95% of all pregnant women tested for HIV, syphilis, and hepatitis B and, in places with a high HIV rate, lactating women tested during

late pregnancy and the postpartum period; 95% of all women of reproductive age living with HIV assisted by health services; and 95% of pregnant and lactating women living with HIV experiencing viral suppression. However, a recent report produced by UNAIDS [1] warns of the stagnation of advances related to the eradication of AIDS among children, adolescents, and young women and the distance of the goals in countries such as Angola, Cameroon, Democratic Republic of Congo, Ghana, Kenya, Malawi, Nigeria, Tanzania, Uganda and among others.

We aimed to report the findings of a narrative synthesis in order to comprehend the reasons behind the considerable challenges faced by pregnant and postpartum women in maintaining adherence to antiretroviral therapy and life-saving medications.

Methods

We conducted a narrative synthesis, considering the significance of such a review for advancing and deepening a specific research topic in the field of health sciences, with the potential for novel discoveries and investigations. The mixed methodology was chosen due to the richness of the qualitative approach, enabling a more profound comprehension of the phenomena under investigation and its relevance in addressing the complexity of the subject. This decision facilitated the acquisition of cooperative and integrated perspectives across diverse areas of knowledge, thereby broadening the research scope.

The searches were conducted using the information sources PubMed, Embase, LILACS, CINAHL, Web of Science, and Scopus.

The eligibility criteria for the articles are described in Table 1.

Table 1: Inclusion and Exclusion Criteria for Studies.

Inclusion criteria	• Studies involving women living with HIV during pregnancy, childbirth, or the postpartum period and receiving antiretroviral therapy, and/or health professionals who provide care to these women;.
	• Studies addressing the relationship between motherhood and ART use, including acceptability, adherence, retention, and decision-making related to antiretroviral therapy;
	• Studies employing qualitative or mixed-methods designs; Studies conducted within the health field.
	• Articles in Portuguese, English and Spanish
Exclusion criteria	• Studies Conducted exclusively with family members and/or partners Opinion article, editorial, review, or literature review

No specific year range was applied to the selected studies. The primary justifications for this choice were: The studied theme (antiretroviral therapy for HIV and maternity among women living with HIV) is relatively recent, with a more significant number of articles being added to the literature mainly from the year 1996 onward, and w the oldest article found in the search was from 1992.

The primary search terms utilized were: "Anti-Retroviral Agents," "Medication Adherence," "HIV," "Pregnant Woman," "Reproductive Behavior," "Pregnancy," "Parturition," and "Postpartum Period," along with their corresponding synonyms, indicated by the Health Descriptors (DeCS/MeSH) of the Virtual Health Library. Table 2 shows the descriptors used and their synonyms.

Table 2: Keywords Used In the Search in Indexed Databases.

"Agents, Anti-Retroviral" OR "Agents, Antiretroviral" OR "Anti Retroviral Agents" OR "Antiretroviral Agents" OR "Antiretroviral Therapy" OR "Adherence, Drug" OR "Adherence, Medication" OR "Compliance, Drug" OR "Compliance, Medication" OR "Drug Adherence" OR "Drug Compliance"
AND "HIV" OR "Acquired Immune Deficiency Syndrome Virus" OR "Acquired Immunodeficiency Syndrome Virus" OR "AIDS Virus" OR "AIDS Viruses" OR "aids" AND "Pregnant Woman" OR "Woman, Pregnant" OR "Women, Pregnant" OR "Women, Postpartum" OR "Postpartum Women" AND "Reproductive Behavior" OR "Behavior, Reproductive" OR "Pregnancy" OR "Gestation" OR "Pregnancies" OR "Parturition" OR "Parturitions" OR "Postpartum Period" OR "Period, Postpartum" OR "Postpartum" OR "Puerperium"

The search process was ordered as follows: 1. Search for identified descriptors and initial screening; 2. We arranged the articles based on descriptors identification, preliminary screening, exclusion of duplicates with EndNote and Rayyan, title and abstract scanning. Ineligible articles were excluded with the help of other researchers 3. Selection of all remaining publications by title and/or abstract; 4. Exclusion of articles that do not fit eligibility criteria; 5. Analysis of included publications from full reading; 6. Review based on the articles analyzed.

The following topics were compared and analyzed: Vertical transmission of HIV; Acceptability of antiretroviral drugs, treatment, and treatment retention among pregnant and postpartum women; and Strategies and health care of participants and/or patients living with HIV during pregnancy, childbirth, and postpartum.

The search in Pubmed, Embase, Lilacs, CINAHL, Web of Science, and Scops uncovered 1429 articles. The selection criteria were: 1) Studies with women living with HIV on ART and/or health professionals who assist them; 2) Research or intervention on the relationship between motherhood and ART use applying qualitative or mixed methodologies.

We arranged the articles based on descriptors identification, preliminary screening, exclusion of duplicates with EndNote and Rayyan, title and abstract scanning. Ineligible articles were excluded with the help of other researchers and we selected the remaining 14 articles for a thorough reading.

Our review resulted in synthesized evidence and analyses, paving the path for new interpretations of the investigated phenomenon. The studies on motherhood and Antiretroviral Therapy (ART) from the perspective of mothers, pregnant women, and postpartum women living with HIV as well as health professionals assisting them, focused on the following aspects: a) Risk management of vertical transmission (VT) of HIV and its interconnection with the child; b) Acceptability, adherence, and retention of antiretroviral treatment; c) Strategies and health care during pregnancy, childbirth and/or postpartum; d) Desire and decisions about motherhood among couples where the woman lives with HIV. These aspects were translated into the analysis categories for the Narrative Synthesis.

Results

The flowchart (Figure 1) shows the process of search and inclusion. In this research, we incorporated 14 articles that utilized diverse data collection methods, including in-depth interviews (14), questionnaires (4), and focus group discussions (3).

The studies' publication years ranged from 2010 to 2020, when the medication's HAART or triple therapy version was well-established, and the benefits of HIV viral suppression were widely disseminated in academic and healthcare practices.

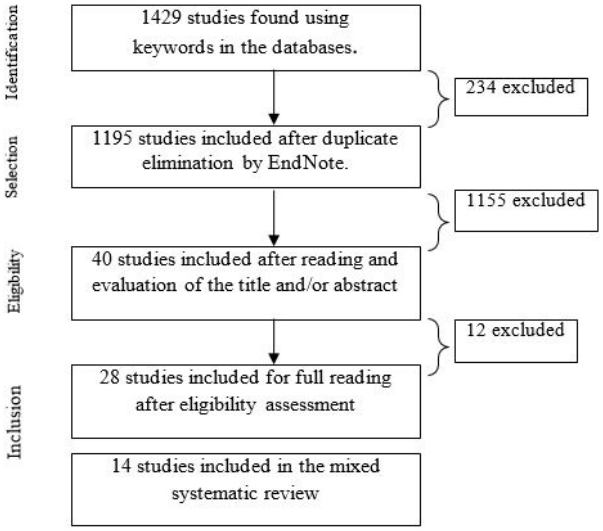

Figure1: Flowchart of the Study Search Process.

Our investigation aimed to explore interventions and/or analyses about the interface between maternity and ART usage. We mainly focused on evaluating acceptability, adherence, retention, and decision-making processes related to antiretroviral therapy among pregnant and postpartum women living with HIV. Our analysis also involved a comparative assessment of the strategies employed by these women and the health professionals involved in their care.

Table 3: Information about Selected Studies in Systematic Review

Authors	Year	Origin of participants	Type	Methodology
[15]	2017	Rwanda	Qualitative research	In-depth interviews with 112 postpartum women, divided into three (3) groups: with children between seven (7) and 12 months old; between 13 and 18 months old; and between 21 and 24 months old.
[16]	2020	South Africa	Qualitative research	In-depth interviews with 21 postpartum women during the period of introduction to maternal and child health clinics.
[22]	2021	Tanzania; South Africa; Malawi	Mixed methods research	In-depth interviews with 87 participants, including: women receiving prenatal care, their partners, and healthcare providers.
[21]	2010	Kenya	Qualitative research	In-depth interviews with 10 pregnant women, eight (8) postpartum women, and five (5) women intending to conceive who have not been on HAART for more than six months.
[17]	2018	South Africa	Mixed methods research	In-depth interview with 177 women who gave birth in the region's maternity hospitals and reported poor self-reported adherence.
[23]	2014	India	Qualitative research	In-depth interview with 14 women who recently gave birth (up to two months prior to the interviews). All had received specialized prenatal care and were of legal age.
[27]	2015	Malawi	Qualitative research	In-depth interview with 35 pregnant women on antiretroviral therapy (ART) and in the reproductive age range.
[28]	2018	Indonesia	Qualitative research	In-depth interview with 20 pregnant and postpartum women with live births, and 20 healthcare professionals involved in vertical transmission prevention.
[18]	2018	Nigeria	Mixed methods research	In-depth interview with five (5) healthcare professionals, including two (2) nursing assistants, one (1) nurse, one (1) monitor, and one (1) pharmacist.

				Focus group discussions with two (2) groups, each consisting of nine (9) pregnant women.
[25]	2012	Congo	Qualitative research	In-depth interview with 40 pregnant or recently postpartum women.
[26]	2010	Uganda	Qualitative research	In-depth interview with 22 women, including seven (7) who received TARV before and during pregnancy and nine (9) who started during gestation.
				Focus group discussions with six (6) groups, each comprising approximately six (6) to 10 women, involving a total of 45 mothers.
[19]	2013	Tanzania	Qualitative research	In-depth interview with 23 women who had detectable viral load at 24 months postnatal.
[20]	2014	Uganda	Qualitative research	In-depth interview with 25 women living with HIV and receiving TARV, including pregnant women in the 2nd and 3rd trimesters.
[24]	2016	Swaziland	Qualitative research	In-depth interview with 83 postpartum women, recruited during their child's immunization visit at 6 or 10 weeks. They were divided between 50 who had chosen to initiate TARV and 33 who had not started.
				Focus group discussions with 7 groups, each comprising approximately five (5) to 11 participants. Four (4) discussions were conducted in English with nurses employed in maternal and child care units for at least 1 year, and three discussions were conducted in the local language with postpartum women.

The articles were categorized into four themes: Relationship with treatment, Decision to become pregnant, Practices in health services, and Relationship with the child. In the category "Relationship with treatment," six studies are included with the central theme of acceptance of antiretroviral drugs, adherence to treatment, and retention of services [15-20]. The other findings on the theme of antiretrovirals and maternity were divided between issues faced by women living with HIV who are in ART and health professionals who assist these women and the aspects related to these two populations are further subdivided among individual, social, and care.

Table 4: Summary of the Selected Studies and Aspects Related To Art Adherence.

Issues faced by	**Aspects mentioned in the findings**		
	Individual	**Social**	**Care**
Key Findings	Empowerment; Side effects; Treatment fatigue; Perception of the experienced stigma; Fear of pregnancy loss.	Partner abandonment; Community stigma; Food insecurity; Religious barriers.	Attitude of healthcare professionals; Waiting time; Overcrowded services; Lack of confidentiality.
	1. Individual empowerment, motivation for care, and perceptions about the need for and benefits of ART [15, 21, 22, 28, 32, 36, 46]	1. Fear of abandonment by partners and negative attitudes of others that contribute to poor ART adherence [2-5, 15, 36]	1. Attitude of health professionals and counseling on ART and maternity [21, 22, 25-28, 32]

Women living with HIV undergoing antiretroviral therapy	2. Negative experiences with side effects [2, 3, 15, 22, 36] 3. Personal issues, such as trips, lack of time, and other difficulties related to occupations/duties [2, 3, 36.] 4. Child weaning and misinformation about risks of transmission by breast milk [15, 32.] 5. Treatment fatigue [2, 15..] 6. Feeling of hopelessness and disbelief in the efficacy of ART [15] 7. Starting the treatment and integrating antiretroviral drugs into the routine [3] 8. Stigma and fear related to pregnancy loss [25]	2. Psychological distress due to discriminatory attitudes in the community and stigma related to HIV [2, 3, 15, 31, 36, 46] 3. Food insecurity and prolonged fasting [2, 15, 36] 4. Religious barriers [2] 5. Social pressure to get pregnant even if they do not want to [5]	2. Fear that going to the clinic will result in forced diagnostic disclosure and fear of seeking pills in the pharmacy or storage of antiretroviral drugs [3, 15, 31, 46] 3. Waiting time and overcrowding of health services [36, 46] 4. Frustrations with health services' lack of established criteria regarding quantities of medication required for multiyear prescriptions of ART, and for sending patients to "facilitated pharmacies" where they can obtain medication faster[10]. 5. Breach of reliability in the delivery of test results, drugs, or transfer of information to others [31]
Health professionals who provide care to them	1. Missed opportunities to talk about pregnancy planning [5,25] 2. Using strategies to maintain patient confidentiality [46]	1. Difficulties in ensuring that women living with HIV understand transmission via breastfeeding [32] 2. Reproduction, within health services, of discriminatory practices and aspects of common sense [2]	1. Overcrowding of services with controlled HIV patients and poor distribution of care time for exceptional cases [10] 2. Working conditions and workload [10]

	3. Reliability of patient reports on frequency of drug taking[36] 4. Poor communication with service users[31]		3. Care focused on referral to reference services with no personal bonding[31]

Most of the research was conducted in African countries such as South Africa (3), Malawi (2), Tanzania (2), and Uganda (2), whose authors were from the respective countries. However, a notable selection included authors from the United States (6) and Sweden (2). The choice for such regions seems to be related to higher rates of fertility, birth, and prevalence of HIV infections in the general population and in pregnant women and children.

Most researchers investigated residents of poor areas [16], with family income from informal jobs [21], subsistence agriculture [22], and housework [21]; and places with high HIV prevalence in the general population [20-23], and among pregnant women [24], and high rates of prenatal infections among children [16, 18]. Sometimes, the percentages of infected women surpass those of infected men [22].

Some of the studies evaluated exclusively involved women who had difficulty with medication adherence or who chose not to start ART [17, 23-24], and most studies collected data from participants in the postpartum period [15-16, 19, 21, 23-26].

The present narrative synthesis included qualitative and mixed-methods studies, which represent a valuable contribution to the field of health research. The decision to incorporate qualitative studies aimed to explore the contextual nuances, experiences, and perceptions of individuals involved in the subject matter, thereby enhancing the depth and comprehensiveness of the investigated phenomena.

Furthermore, the topic under investigation appears to have limited representation in the existing scientific literature. Despite the growing concern surrounding health-related issues, the relatively scarce number of articles on this subject underlines this review's significance and relevance in addressing a crucial knowledge gap.

Determinants of Adherence at the Individual Level

Despite the effort to separate individual, social, and care aspects related to treatment adherence, note that many can only be considered in some of these categories. Aspects understood as individual such as motivation and empowerment [15-16, 18-19], optimism [20], and perception about treatment benefits for themselves and their children [15-16, 20] are cited as essential factors for adherence among the women interviewed.

While the antiretroviral regimen details used by the participants are rarely mentioned in existing studies [15, 18, 21], it is crucial to note that providing such information is valuable for delineating characteristics like anticipated or reported side effects. Additionally, understanding the drugs prescribed as first-line treatments in the specific region and/or during the study period is essential.

The reported side effects included weakness [15, 17-19], vomiting, nausea, hallucinations, rashes, insomnia [17], excessive sleep [19], signs of liver problems, loss or irregular gain of body fat [24], dizziness, and increased appetite loss or gain [15]. The effects can be reduced over time and with adaptation to treatment [15, 18] or amplified when used with other medications [18].

A strong motivator for adhering to ART is the reduction of symptoms and improvements in health status, even with side effects [15, 20]. Side effects are overcome by some women, who resist and do not interrupt treatment by relying on positive results and identifying reactions as common presentations; these may be a factor in increasing confidence in drug action. Investigating and managing side effects during clinical follow-up can help with adherence to treatment [17], with the possibility that health professionals may develop strategies for managing the effects felt and show openness to modifying schemes.

An effective strategy to reduce interruption and discontinuation of antiretroviral treatment is centered on providing information and individualized listening. Additionally, the results indicated a positive evaluation of counseling on antiretrovirals to enhance treatment adherence [15, 17-20].

Resistance to drugs is pointed out as an interference factor to adherence, but the articles reviewed did not deepen the discussion [17-19]. Thus, studies that address viral resistance as an amplifier of treatment abandonment are needed since they could lead to changes in antiretroviral regimens.

Another factor in ART abandonment is the weaning of the child [15, 19]. A study conducted in Rwanda identified the weaning of children, occurring between 13 months and two years, as a crucial period for change in ART adherence and perception of these women – from a treatment that involved benefits to the mother/baby pair to a treatment that involves benefits to their health. In this sense, the findings indicate that in countries such as Malawi, Tanzania, and South Africa, engagement in health care and frequency of visits to clinics decreased among women living with HIV after weaning [15].

The UNAIDS report [1] documented the contribution of breastfeeding to HIV VT in 11 of the 21 countries studied: Mozambique, Zambia, Tanzania, Kenya, Ivory Coast, Malawi, Lesotho, Uganda, Eswatini, South Africa, Namibia it accounted for half or more of HIV infections among children. This transmission may be related to late entry into prenatal care, late onset of ART, new HIV infections during postpartum, and low engagement with ART or care abandonment during pregnancy and breastfeeding.

Given these possibilities and the challenges posed by the issue of breastfeeding among PLWHA, the need to ensure that women understand ways to minimize the transmission of the virus through breast milk is emphasized since, without the necessary understanding of risks and benefits, they may underestimate the need to comply with recommendations. The reports of 40 lactating Congolese women living with HIV showed a low level of knowledge about VT, little understanding of the role of breastfeeding in the transmission to the baby, and the choice of exclusive feeding via breastfeeding in the face of cultural norms related to child nutrition and lack of financial resources [25].

Additionally, it is pertinent to underscore contemporary advancements that allow breastfeeding for women with undetectable viral loads. This novel paradigm emphasizes the vital importance of ongoing treatment adherence. In light of these strides, ensuring that women receive transparent information and continuous support is crucial, empowering them to make informed decisions about breastfeeding, considering their cultural contexts, social norms, and specific health conditions. This fresh understanding underscores the significance of an integrated approach to optimize maternal and child health, aligning with scientific advancements and the individual needs of these women.

Determinants of Adherence at the Social Level

Although reflected as particular behaviors, individual factors may be influenced by social issues. Some examples include psychological distress [19]; religious barriers [17]; knowledge about treatment and sharing of information with peers [16]; and watershed personal events such as divorce, separation, or loss of employment [15]. Among the social factors is HIV-related stigma [15-19], which is connected to most of the other aspects.

Interpersonal relationships are highly related to adherence to ART. Fear of abandonment by partners and negative attitudes of third parties contribute to poor adherence [15-19, 21, 27]. On the other hand, the attitudes of health professionals are pointed out as an influence, both in terms of coping with the illness and of more significant motivation for treatment, or conversely, for the distancing from health services and irregular adherence [17, 20, 23, 26, 28].

Another important aspect is the support of third parties, including assistance obtaining medications from pharmacies, reminders about consultations and medication schedules, emotional support, and attitudes for coping with stigma. Support can come from friends or relatives [15-16, 18-19], health professionals [15-16], or PLWHA, through the exchange of information in waiting rooms or groups [16].

Women's personal belief in the effectiveness of antiretrovirals outweighs the issues of encouragement of the partner. However, this support is more valued among women who depend financially on their partner [28]. Studies have indicated that diagnoses frequently are not shared with the partner, calling attention to issues such as gender violence, financial dependence, and fear of abandonment [18-19, 27].

Hunger, prolonged periods of fasting, and insufficient or inadequate eating appear to be causes of poor adherence [15, 19, 21]. These can be exacerbated by the need to walk long distances to clinics [17], feeling hungrier after the use of antiretrovirals, inability to follow health prescriptions that emphasize the need to take medication after eating, or the perception of an increase in the intensity of side effects if the medication cannot be taken with food [19].

Women reported difficulty in taking medications without reinforced eating; they also reported dizziness and difficulty walking. However, guidance from health professionals on good eating habits, with diversification of fruits and vegetables, is unrealistic and disregards the reality of the users advised [19]. In a study on an aspect of adherence called "self-efficacy," most women interviewed perceived the change in eating habits due to using ART as necessary. They were willing to adhere completely (n = 80, 63.5%) or moderately (n = 38, 30.2%) in search of positive treatment results [18].

After the baby's birth, health professionals give guidance to their children. However, the postpartum period has challenges related to milk production in the face of poor health, lack of food, and low nutrition [25]. Ideal eating habits can become more challenging to achieve, especially in the face of new dynamics arising after birth, including informal work, daily household chores, care for the newborn and other children, and visits to the clinic. Thus, in some cases, to reduce the burden of drug collection in Karonga [22], some antiretroviral refills were sent by volunteers to the patients' homes.

Determinants of adherence at the care level

Despite advances in care – such as the provision of medicines and help with the cost of accessible transportation and treatments – an article published in 2013 highlighted that adherence remained a challenge among pregnant women in Tanzania, especially during the first two years of diagnosis. Among the barriers to ART adherence among these women, the main ones were financial issues, which include extra costs for treatment, transportation to services, and long waiting periods in clinics, which could represent losses at work and salary reductions. Individual aspects such as poverty and stigma make services essential to simplify treatment access and make care more flexible [19].

Whereas, sometimes, the proximity of a clinic to the residence can facilitate adherence since it means less time and money spent commuting [18], some women carefully select clinics distant from their homes as a possible strategy for anonymity. Likewise, PLWHA uses different strategies, such as address forgery; use of a card with the child's name so as not to be identified at calls, in consultations, or when collecting ART in the pharmacy; and hiding medications in bags or even sitting on their medical records to cover HIV-related identification [16].

Discussion

Multiple strategies are proposed among postpartum women, which could be overlapping and interconnected, and none is sufficient alone for the success of maternal involvement regarding care for their HIV treatment [16].

In the face of the challenges presented, investment in counseling practices is cited in all selected articles as a coping strategy that different professionals and approaches can carry out. In the HIV/AIDS context, counseling emerges as a prevention strategy, implemented during HIV testing, intervening at the individual level to work on the subject's autonomy and risk management and to provide information on preventive measures [29].

Different types of approaches and themes that should be present in the patients' counseling were proposed, such as a) inclusion of guidance aiming to increase belief in the efficacy of ART; b) demonstration of visible improvements in the appearance of patients; c) presentation of proof of efficacy of treatments such as increased CD4 rates [15, 21, 27, 28]; d) explanations about how an HIV diagnosis is not obvious and attitudes for coping with stigmas [15, 23]; e) encouragement of messages that indicate ART as a lifetime commitment [24]; f) discussions regarding the choice of an infant feeding method [25]; g) family planning [27]; and h) an approach to maternity with inclusion of partners [28].

The support network is essential in adopting a posture for facing challenges. Therefore, incentives for the social support of spouses and family members [18, 27, 28], institutional support from health and care professionals [15, 23, 28], and the interaction between other women living with HIV in the sharing of testimonies [15, 20] are relevant recommendations for overcoming fears and barriers related to ART among mothers.

Inside and outside the walls of institutions, at community levels, respect for human rights and the attitude of confronting stigma, discrimination, and prejudice [23, 28] also gain prominence. Health professionals should assume an understanding attitude, with flexibility for conducting and adopting an open posture on the need for beginning treatment, including an opportunity for "time to think" [28] and approaches adapted to territorial [22] and personal realities which focus on individualized listening to experiences and perceptions [22, 23].

Finally, planning services and infrastructure can facilitate access to antiretrovirals and reduce barriers related to adherence. These include offering free services, paying attention to informed consent for HIV testing, using tests within the appropriate standards, providing correct results and guaranteed confidentiality [23], implementing a system of spaced and fast scheduling to be offered to the more stable patients [22], the possibility of care at home, greater ease for dispensing medicines to third parties, and the provision of waiting rooms that avoid distinctions indicative of treatments, thereby ensuring anonymity regarding the healthcare received [16].

In summary, the data from this study demonstrate that the dimensions discussed are not limited to theoretical interpretations but directly reflect the experiences reported by participants. Counseling was associated with strengthened confidence in ART and perceived clinical improvements; family and community support emerged as decisive factors for adherence; and stigma was evidenced both as a barrier and as a space for resilience through peer exchange. These findings reinforce the need for health programs that integrate individual and collective counseling practices, expand support networks, and promote strategies to combat stigma, thereby aligning with global goals for the prevention of vertical transmission.

Final Considerations

The survey and its exposure to different factors for adherence to medication regimens indicate facilitators and barriers to treatment of women living with HIV/AIDS. Investments in health services can be an option for improvements related to antiretrovi-

ral treatment in the context of maternity, with hiring qualified health professionals, free treatment close to home, and advice on ART.

Among the strategies for coping with the issues raised access to information and building bonds – within health institutions, with professionals open to listening to demands and flexible in their recommendations, and outside them, encouraging the emotional support of partners and family members, with the exchange of experiences among PLWHA and coping with stigma in communities – are evidenced as means of achieving better results.

Although advances in terms of reducing side effects, extending the duration of action, decreasing the number of medications, potency, and diversifying options have facilitated notable progress in the care cascade for pregnant women living with HIV; the 2025 target remains a challenge.

Ensuring that optimal recommendations for Vertical Transmission Prevention are achieved, particularly regarding viral load suppression at the time of delivery, is still an objective to be met. Reducing global funding for HIV could complicate matters, thus underscoring the significance of local funding and practical strategies to overcome region-specific challenges. Active engagement from the healthcare sector, governmental bodies, and civil society will be crucial to address obstacles and ensure continuous progress towards established objectives.

Limitations

The final interpretation of this study's results indicates that the main limitation is the territorial restriction of the final selection based on the search. All of the studies selected involved participants from African countries, whereas the researchers are mostly from the United States and Europe. Based on the perception of participants living in the global North, we see the potential for more studies on them.

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