



## Indonesian HIV women's perception about hiv- transmitted prevention in pregnancy intention: A peer support group survey

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### ABSTRACT

**Background.** In Bandung city, the prevalence of HIV-positive women increased annually. It can potentially produce an infected fetus if they are pregnant because HIV (human immunodeficiency virus) can pass through the placenta and transmit to the fetus. With women's awareness, preventing transmission risk may be beneficial to achieve a safe conception, pregnancy and birth for women who are planning to have a baby. **Aims.** This study aims to identify HIV women's perception of the perinatal spread of HIV in pregnancy and highlights their role in managing transmission prevention. **Method.** Fifty-two women with diagnosed HIV belonging to active members of a peer support group (PSG) in Bandung city, Indonesia, answered survey questionnaires. The questions covered behaviors components on perceived HIV-transmitted risk, benefits and obstacles and self-confidence in HIV-transmitted prevention (5-point scale). The data collection was carried out about two months. **Results.** Participants generally have a positive perception of HIV-transmitted prevention. Of the 52 women, 51.4% (n=27) showed positive perceptions of HIV-transmitted susceptibility, 60% (n=30) felt no barriers to HIV-transmitted prevention, and 51.4% (n=27) had positive self-confidence in HIV-transmitted prevention. In contrast, 54.3% of women (n=28) indicated that they negatively perceive the benefits of HIV-transmitted prevention. **Conclusions.** These findings provide important clues for planning HIV management before pregnancy, highlighting the domains that health professionals should seriously focus on in giving proper intervention. Health professionals should use specific strategies to promote the benefits of HIV-transmitted prevention to achieve the demands of safe conception, pregnancy and postpartum.

**Keywords:** HIV, perceived, prevention of HIV-transmitted, pregnancy, women.

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## INTRODUCTION

The global incidence of HIV cases continues to experience an upward trend. As of 2016, data provided by the World Health Organization reveals a staggering 36.7 million individuals living with HIV worldwide. Women constitute 50% of this population, and there are 2.1 million children under the age of 15 who have been affected by this virus (World Health Organization, 2016). In Indonesia, the distribution of HIV cases shows a notable gender imbalance, with a ratio of 1:2 between men and women. The primary contributing factor to HIV transmission is sexual relations, accounting for 53% of cases. It is noteworthy that housewives represent the highest demographic among those with AIDS in Indonesia, as the Directorate General of P2P, Ministry of Health RI reported in 2017.

Zooming in on Indonesia's West Java Province, it ranks fourth in terms of the prevalence of HIV/AIDS cases, and the city of Bandung stands out with one of the highest occurrences of HIV and AIDS cases (Krylova, 2021). The cumulative number of HIV and AIDS cases reported from 1991 to 2016 amounts to 3,960 cases, averaging around 160 cases annually. Sexual intercourse remains the predominant risk factor, contributing to 81% of cases. Most of those affected fall within the age group of 20-39 years, accounting for 82.09% of cases, according to data from the Bandung AIDS Commission in 2016.

Groups of men diagnosed with HIV may contribute to an increase in women contracting HIV. Additionally, if no intervention is undertaken, women with HIV are likely to raise the percentage of children with HIV by 15% to 45% due to the transmission of the virus from them to their infants. This transmission can occur through the placenta during pregnancy, childbirth, or breastfeeding (WHO, 2013).

Efforts to prevent HIV transmission in Indonesia are regulated by Minister of Health Regulation No. 51 of 2013, which outlines actions related to mother-to-child HIV transmission (PPIA). There are four key components, often referred to as "prongs," which include preventing HIV transmission to women of reproductive age by providing information, preventing unplanned pregnancies in mothers with HIV, reducing HIV transmission from HIV-positive pregnant women to their babies, and offering psychological, social, and support services for HIV-positive mothers, their children, and their families (Ministry of Health, 2013). In Indonesia, this intervention has been recognized as an effective measure in preventing mother-to-child HIV transmission. It has been implemented across various healthcare services in both public and private institutions.

According to the Ministry of Health in Indonesia (2022), the central focus of PPIA activities is preventing HIV transmission from pregnant women to their infants. This primarily revolves around maternal and child health (MCH) initiatives. These initiatives encompass various components such as antenatal care (ANC), which encompasses activities such as HIV testing, HIV diagnosis, the provision of antiretroviral therapy, ensuring safe childbirth, promoting appropriate infant and child feeding practices, pregnancy spacing and regulation, administering antiretroviral prophylaxis, and cotrimoxazole for children, as well as conducting HIV diagnostic testing for children. Other services, including immunization for mothers, screening for sexually transmitted infections (STIs), and the administration of iron supplements, are also provided to pregnant women with HIV, all of which aim to enhance the overall health status of mothers.

In West Java alone, the effectiveness of this intervention has been hindered due to insufficient hospital facilities and infrastructure, as documented by Lestary et al. in 2016. Meanwhile, a study conducted by Mardhiati and Handayani in 2011, focusing on implementing PPIA by HIV-positive women, revealed that although most participants found PPIA services accessible, they did not utilize them. It is important to note that behaviour is one of the primary determinants of health, surpassing other factors, as emphasized by Notoatmodjo in 2014. Individual behaviour can be significantly shaped by perception, which is the result of sensory experiences, including sight, hearing, and smell, as explained by Notoatmodjo in 2007. The Health Belief Model offers a framework to explore these perceptions.

The Health Belief Model comprises four key components: the perception of susceptibility and severity of a particular disease, the perception of obstacles to performing a specific action, the perception of the benefits an individual can gain, and the perception of self-confidence to undertake that action. These four perceptions can be influenced by external factors, such as guidance from the community, which encourages individuals to take actions that ultimately lead to a positive impact on their well-being, as proposed by Rosenstock, Strecher, and Becker in 1988, as cited in Glanz et al. in 2008. In a study conducted in Jakarta by Antonius et al. in 2016, which involved 130 individuals living with HIV and undergoing antiretroviral therapy (ART), it was discovered that there exists a significant association between the perceptions of those living with HIV and their adherence to ART. Specifically, individuals with a positive perception of the severity of the disease were more likely to adhere better to their treatment regimen. These perceptions play a crucial role in shaping participants' beliefs regarding the complications of HIV and their considerations of the advantages, disadvantages, and external support that can influence their attitudes toward preventive actions against HIV. One form of external support or motivation is peer support, as Ainun et al. highlighted in 2016.

Currently, four peer support groups (known as KDS) operate under the Spiritia Foundation in Bandung City. Among these groups, only one is dedicated to women living with HIV (Spiritia Foundation, 2017). Upon observation, it was noted that the peer support group members who planned to become pregnant were aware of the importance of preventing HIV transmission from mother to child. Consequently, they can be categorized as part of the third component (prong 3) of PPIA services. Some of these women had strategically planned their pregnancies by consistently using condoms when their viral load was still high and adhering to ARV therapy. However, most reported experiencing unplanned pregnancies

and had not considered further steps to prevent HIV transmission. These steps include seeking healthcare services tailored for women with HIV, consulting with obstetricians, and ensuring consistent condom use, although some found condom use inconvenient. Consequently, the researchers recognized the need to explore the perceptions of women living with HIV regarding preventing mother-to-child transmission.

**RESEARCH METHOD**

This research falls within the category of quantitative descriptive research. The study focuses on various variables related to the perceptions of women living with HIV regarding preventing mother-to-child HIV transmission. These variables encompass sub-components such as the perception of HIV-positive women concerning the susceptibility and severity of the disease, perceived benefits, perceived barriers, and their self-efficacy in preventing HIV transmission from mother to child. The study was conducted within the Female Plus Peer Support Group (PSG) in Bandung City.

The study population comprised 52 women living with HIV who actively participated in the Female Plus PSG in Bandung. The researchers employed a purposive sampling method, selecting 35 individuals who met specific inclusion criteria, which included being on antiretroviral (ARV) treatment, being married, and having basic literacy skills. Women with HIV who had progressed to the AIDS stage were excluded from the study.

To collect data on the perceptions of women living with HIV, the researchers utilized questionnaires based on the Health Belief Model theory, consisting of 36 statements that had undergone validity testing with values ranging from 0.451 to 0.733. The reliability of the questionnaire was assessed using Cronbach's alpha, yielding a value of 0.813, indicating both reliability and validity. The research was conducted following ethical standards and received approval from the Research Ethics Committee of Padjadjaran University in Bandung (permission letter no. 109/UN6.KEP/EC/2018).

Data analysis involved frequency distribution, using the mean value of all respondents' total responses to the questionnaires for each sub-variable. Women living with HIV were categorized as having a positive perception of their total responses equalled or exceeded the mean value. In contrast, those whose total responses were below the mean value were considered to have a negative perception. Subsequently, the data was organized into a frequency distribution table based on the components outlined in the Health Belief Model.

**RESULTS OF STUDY**

As shown in Table 1, most respondents were in the age range of 20-29 years (51.4%), had a secondary education equal to high school (54.3%), had children (51.4%), planned to have children (68.6%), and were undergoing ARV treatment for at least or more than 2 years (62.9%). It is also shown that almost half of the respondents were in the age range of 30-39 years (34.3%), had no children (48.6%), did not plan to have children (31.4%), underwent ARV treatment for less than two years (37,1%), and a small percentage of respondents had primary education (22.9%) and higher education (22.9%) background.

**Table 1. Frequency distribution based on the characteristics of respondents in the Woman Peer Support Group (n = 52)**

Characteristics	Frequency (f)	Percentage (%)
<b>Age</b>		
20-29 years	27	51.4
30-39 years	12	34.3
40-49 years	5	14.3
<b>Education</b>		
Primary	8	22.9
Secondary	24	54.3
Higher	8	22.9
<b>Length of ARV treatment</b>		
< 2 years	13	37.1
≥ 2 years	31	62.9
<b>Have children</b>		
Yes	18	51.4
No	26	48.6
<b>Plan to have children</b>		
Yes	32	68.6
No	11	31.4

Table 2 illustrates that of 35 respondents, the more than half of the women with HIV had a positive perception (54.3%) while the rest had negative perceptions (45.7%). Table 3 describes that the perceptions of women with HIV tends to be positive in the perception on vulnerability and severity (51.4%), obstacles (60%), and self-confidence (51.4%) sub-variables. However, the perception on benefit is negative (54.3%). Other data show negative perceptions on a small number of respondents for the perception of vulnerability and severity (48.6%), obstacles (40%), and self-confidence (48.6%) sub-variables, while the perception on benefit shows positive perception (45.7%).

**Table 2. Frequency distribution based on perceptions of women with HIV in Peer Support Groups Especially Women (n =52)**

Perception	Frequency (f)	Percentage (%)
Positive	28	54.3
Negative	24	45.7

**Table 3. Frequency and percentage based on perceptions of women with HIV sub-variables Peer Support Group (n = 35)**

Perception sub-variables	Category			
	Positive		Negative	
	F	%	f	%
Perception of vulnerability and severity	18	51.4	17	48,6
Perception of benefits	16	45.7	19	54.3
Perception of obstacles	21	60	14	40
Self confidence	18	51.4	17	48,6

Table 4 demonstrates that in the perception on vulnerability and severity, the respondents have the highest positive perception on the statement of ARV therapy should be given to children immediately to reduce the risk of HIV transmission (97%) and have a negative perception of the statement of food chewed by mothers with HIV potentially transmit the virus to her baby (77%). In perception on benefit, the respondents have the highest positive perception on early HIV examination in children to reduce the risk of HIV transmission (100%), opting the hospital as preparation for childbirth (88%) and negative perceptions on statements that they can consult in any health services while pregnant (40%). In the perception on obstacles, respondents have a positive perception on a statement expressing that financial problems is an obstacle to health checks (77%), and that suggesting that the provision of ARV therapy and cotrimoxazole prophylaxis in infants is not easy (80%). In the perception on self-confidence, respondents have the highest perception on confidence in lifelong ARV treatment (85%), provision ARV therapy and cotrimoxazole prophylaxis for children until they are diagnosed with negative of HIV (88%), and confidence in not breastfeeding their children (97 %).

**Table 4. Frequency and percentage distribution based on the highest positive and negative statements on each perception of the sub-variables**

Statement of perception sub-variables	Category			
	Positive		Negative	
	f	%	f	%
<b>Perception of vulnerability and severity</b>				
In my opinion, ARV can reduce HIV transmission from mother to fetus	35	100	0	0
I assume that the food chewed by mothers with HIV has the potential to transmit HIV to babies	8	23	27	77
In my opinion, children will be at greater risk of contracted HIV if ARV therapy is not immediately given to them.	34	97	1	3
<b>Perception of benefits</b>				
In my opinion, determining a hospital as a preparation for childbirth is very important.	31	88	4	12
Condom use can prevent unplanned pregnancies.	31	88	4	12
I think if I am pregnant, I can consult in any health services.	21	60	14	40
In my opinion, early HIV testing in children can reduce the risk of HIV transmission.	35	100	0	0
<b>Perception of obstacles</b>				
I believe financial problems become an obstacle in health checks.	27	77	8	23
Providing antiretroviral prophylaxis and cotrimoxazole therapy to my baby at birth is not easy.	28	80	7	20

**Self confidence**

I believe that I can do ARV treatment in my entire life.	30	85	5	15
I believe that I can provide ARV prophylaxis and cotrimoxazole therapy to my child until he/she is diagnosed negative from HIV.	31	88	4	12
I will not give breast milk to my child	34	97	1	3

**DISCUSSION**

**Characteristics of respondents**

Women living with HIV in this study predominantly fall within the adolescent age group, primarily aged 20-29 years, with a smaller representation of those aged 30-39 years. Regarding the stage of HIV infection progression, the survey participants are situated in the second stage, known as the asymptomatic phase. During this phase, HIV is present in the body but does not manifest symptoms for 5-10 years. Therefore, it is plausible that they contracted HIV within the last five years. Despite being in the asymptomatic phase, women living with HIV can lead relatively normal lives. However, they must exercise caution due to potential complications stemming from HIV infection, which can adversely affect their quality of life.

Notably, women in this age bracket remain actively engaged in their daily activities. Additionally, within this age range, women living with HIV are still of reproductive age and may aspire to have children while taking precautions to prevent HIV transmission to their offspring. Notably, a study conducted by Faradina et al. in 2013 revealed that the older segment of women living with HIV, aged over 35 years, tended to engage more frequently in HIV transmission prevention measures. This tendency is attributed to the increased knowledge and experience that typically accompanies ageing. Although most respondents in our study are younger, it is anticipated that they exhibit a similar level of awareness as their older counterparts, particularly regarding HIV prevention measures for those aged 35 years and above. This is due to the psychological maturity individuals in the 20-30 age range often possess.

In terms of educational background, the majority of the respondents have completed secondary-level education. Despite the ongoing increase in HIV cases in Indonesia since its first discovery in 1987, no direct correlation has been established between one's educational background and the risk of contracting HIV. While individuals residing in urban areas generally attain higher levels of education than their rural counterparts, there is no discernible link between HIV infection and educational attainment, as indicated by Akhiat's research in 2014. Instead, the primary contributing factor to HIV cases is sexual intercourse, closely associated with an individual's lifestyle.

Regarding the duration of ARV (Antiretroviral) treatment that the respondents have undergone, a significant portion of them has received treatment for at least two years or more. Handayani and Dewi's study in 2017 suggested that People Living with HIV/AIDS (PLWHA) who have been on ARV therapy for over two years tend to have a more positive perception of their quality of life compared to those with less than two years of treatment. This may be influenced by the side effects of ARV medications, which are more likely to impact individuals within the initial six months, 6-12 months, and 12-24 months of commencing antiretroviral treatment, in contrast to those who have been on ARV therapy for an extended duration, as indicated by research conducted by Mukumbang in 2022 and Abah, 2021.

Initiating antiretroviral treatment for pregnant women to reduce viral load is typically recommended when they have been on ARV treatment for more than two years, following guidelines from the Ministry of Health RI in 2014 and Nasronudin in 2007. Pregnancy is not advisable for women who have undergone ARV treatment for less than two years due to their lower CD4 counts and higher viral loads, which puts them at risk of transmitting the virus to their infants. Adherence to therapy plays a pivotal role in suppressing viral load in the body. Prolonged viral load suppression is associated with a strengthened immune system, reflected in increased CD4 cell counts, as observed in Karyadi's study in 2017. Another study suggests that ARV therapy throughout one to five years can elevate CD4 cell counts to over 500 cells/mm, as demonstrated by Hutapea et al. in 2017.

Regarding having children, women living with HIV who are mothers tend to possess a more comprehensive understanding of HIV transmission prevention. This heightened awareness is attributed to the fact that most of the surveyed respondents had undergone antiretroviral treatment for over two years, and some had prior experiences of giving birth to HIV-infected children. Consequently, they exhibit greater diligence and care when strategizing family planning. This observation aligns with the findings of Supriyatni in 2023, who asserted that People Living with HIV/AIDS (PLWHA) who are parents generally perceive the disease positively due to their deep desire to witness their children grow up. This strong motivation further encourages their commitment to therapy. Therefore, it is imperative to emphasize HIV transmission prevention efforts from mother to child for female PLWHA who aspire to become mothers. Failure to implement robust prevention measures during childbirth may result in an elevated risk of HIV transmission and contribute to an increase in HIV cases in the Ternate region.

### **Perception of Women with HIV in preventing HIV transmission from mother to child**

This study indicates that the majority of women living with HIV hold a favourable outlook on preventing HIV transmission from mother to child. Their positive perception is predominantly associated with the third aspect, which encompasses various health-related measures such as routine health tests (including CD4 and viral load monitoring), adherence to antiretroviral (ARV) therapy, safe childbirth practices, dietary recommendations for infants and children, pregnancy management, the administration of antiretroviral prophylaxis and cotrimoxazole to children, early HIV diagnostic checks for children, immunization during pregnancy, and iron supplementation for pregnant women.

Furthermore, this research underscores that most respondents possess a constructive perception concerning both the susceptibility and severity of the disease in preventing HIV transmission from mother to child. Most participants demonstrate awareness of how HIV can be transmitted from mother to child, understand the necessary steps to be taken if they have children, and grasp the potential adverse effects of the disease on their offspring. This aligns with findings from Tasa et al. (2013), which revealed that housewives living with HIV who perceived the disease as severe were more likely to utilize Voluntary Counseling and Testing (VCT) services, as opposed to those who viewed the disease as less grave. Similarly, a study conducted by Sunaryo et al. (2016) found that a heightened perception of vulnerability encouraged people living with HIV to adhere to treatment and take measures to prevent HIV transmission. These three studies support the Health Belief Model theory, indicating that the perception of the disease's severity is closely linked to the extent individuals regard it as a serious concern. Consequently, it can be inferred that an increased perception of severity is likely to lead to greater adoption of preventive or treatment measures. In contrast, a perception of reduced severity may result in a lack of preventive action.

Women living with HIV exhibit a positive sense of vulnerability and acknowledge the seriousness of their condition, motivating them to actively engage in healthcare measures to prevent the transmission of HIV from mother to child. This positive perception is evident in their responses to statements indicating that consistent adherence to antiretroviral (ARV) therapy can significantly reduce the risk of transmitting HIV to their fetus during pregnancy. Regular ARV treatment is crucial in optimising HIV-positive mothers' health by effectively lowering their viral load to minimal levels, resulting in a potential reduction in transmission rates of up to 96%, as highlighted by Granich et al. (2009).

However, it is worth noting that while a substantial portion of the respondents exhibit positive perceptions of vulnerability and severity, nearly half of them still hold negative perceptions. This is apparent in their reservations about the statement suggesting that food chewed by mothers could potentially transmit HIV to their infants. Although limited research has been conducted on this specific topic, the United States Department of Health and Human Services, as of 2017, continues to caution HIV-infected mothers against feeding their children food that has been pre-chewed by them in order to mitigate the risk of HIV transmission from mother to child.

Shaver (2005) proposed that perceptions of vulnerability may vary among individuals based on the specific risks they encounter in a given situation. Moreover, various factors influence individual perceptions, including their personal experiences, knowledge, motivation, and personality traits, as noted by Sunaryo in 2014.

The perception of women living with HIV regarding the perceived obstacles to preventing HIV transmission from mother to child (PPIA) is predominantly positive. This perception implies that when individuals do not perceive hindrances in carrying out specific activities related to PPIA, their perception is considered positive. However, respondents still express concerns about financial constraints related to health check-ups and providing children with ARV prophylaxis and cotrimoxazole therapy. In essence, limited access to healthcare resources poses a significant barrier, as not all services offer comprehensive funding. This raises particular concerns for pregnant women living with HIV who do not regularly undergo health check-ups, as it heightens the risk of transmitting HIV to their children, in alignment with the findings of Ibrahim et al. in 2011, who identified financial constraints as the primary hurdle for individuals living with HIV, particularly with expenses related to X-rays and blood tests.

Furthermore, there are challenges related to administering antiretroviral prophylaxis and cotrimoxazole therapy in infants, likely stemming from the complexities of delivering therapy to children compared to adults. Ernawati, in 2012, elaborated that children's lack of adherence to therapy is often attributed to boredom, resistance to medication, established routines for medication, and unpalatable medication. Antiretroviral prophylaxis for infants typically commences within the first day after birth and continues for six weeks. Following this, cotrimoxazole prophylaxis is administered until the child reaches one year of age or until an HIV diagnosis is confirmed. During this period, mothers living with HIV are at risk of transmitting HIV to their children until assurance is obtained that the baby is uninfected, usually up to two years old (Setyoningrum, 2017).

Despite encountering certain obstacles, the majority of the respondents do not perceive significant hindrances when it comes to preventing HIV transmission from a mother to her baby. Consequently, they are likely to engage in preventive measures actively. This aligns with the findings of Fikriana et al. in 2014, who noted that individuals with a positive perception of barriers tend to be more proactive in utilizing healthcare services compared to those with a negative perception.

Regarding self-confidence, respondents exhibit positive self-assurance in statements such as refraining from breastfeeding their children, administering ARV prophylaxis and cotrimoxazole therapy to children, and maintaining a lifelong commitment to ARV treatment. It is anticipated that this positive self-confidence in preventing HIV transmission

will contribute to fostering a favourable attitude, including consistent adherence to ARV therapy to enhance their overall health status. Positive self-confidence can significantly influence adherence to ARV medication, instilling the belief that patients can lead healthier and longer lives, as observed in the study by Kustanti and Pradita in 2017.

In terms of perceived benefits, respondents express a relatively low belief in the advantages of preventing HIV transmission from mother to child. However, they still hold positive perceptions about statements indicating that early HIV screening in children can reduce transmission risks, condom use is effective in preventing unplanned pregnancies, and hospitals are appropriate facilities for childbirth preparations. This suggests that they still recognize the benefits of preventing HIV transmission to their children. Conversely, respondents hold a negative perception that individuals living with HIV can access consultations at all healthcare facilities during pregnancy. This perception might stem from past unpleasant experiences in healthcare settings, as indicated in the study by Fikriana et al. in 2014. In another research conducted by Legiati, Shaluhiah, and Suryoputro in 2010, negative perceptions about the benefits of pregnant women undergoing HIV testing were linked to a lack of clear information regarding the advantages of HIV testing, which contributed to concerns about potential discrimination if the test results were positive.

According to Janz and Becker's (1984) statement, fearing falling ill can compel individuals to modify their behaviour. Consequently, when a person alters their behaviour to address health concerns, it signifies a positive perception regarding the benefits of this new behaviour in mitigating the severity of the illness. Initiating new behaviours hinges on the belief that the advantages of these behaviours outweigh the consequences of persisting with old ones, as elucidated by Glanz, Rimer, and Viswanath in 2008.

Research conducted by Mardhiati and Handayani in 2011 uncovered that the reasons behind the limited adoption of HIV prevention measures by women living with HIV had not been thoroughly explored. Nevertheless, the findings of this study can shed light on why many HIV-positive women perceive the preventive measures for mother-to-child HIV transmission negatively, leading to low adherence.

The Health Belief Model elucidates that individuals will undertake specific actions related to their health if they recognize their disease susceptibility and comprehend the potential threat posed by the disease if preventive measures are not implemented. Furthermore, they must appreciate the benefits, acknowledge the obstacles, and possess self-confidence in managing their health, thus fostering an awareness of the importance of maintaining good health by actively striving to prevent, treat, and manage illnesses effectively.

## CONCLUSION

Women living with HIV at the Female Plus Peer Support Group (PGS) in Bandung hold a favourable outlook on preventing HIV transmission from mother to child, particularly concerning adherence to antiretroviral (ARV) therapy for both mothers and children, as well as HIV diagnostic screenings for children. While these measures have the potential to reduce HIV transmission significantly, some respondents maintain negative perceptions regarding infant and child nutrition, challenges associated with seeking healthcare services (including safe childbirth practices to prevent HIV transmission), and financial limitations, all of which can hinder their efforts to engage in preventive healthcare.

Additionally, respondents do not perceive these preventive measures as particularly beneficial, as evidenced by their negative perceptions of the benefits. This negative perception may undermine the effectiveness of other preventive efforts. Healthcare providers should strictly adhere to antenatal care guidelines, ensuring that antiretroviral treatment is initiated for pregnant women only when they have been on ARV treatment for more than two years. This practice is crucial in reducing the risk of mother-to-child transmission of HIV. As well as needs to develop and implement comprehensive health education programs that focus on the importance of early and continuous antiretroviral therapy (ARV), adherence to medical guidelines, and other health-related measures. These programs should target women living with HIV and expectant mothers.

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### Reviewer's Advice

The authors leave it entirely up to the maintainers to review our articles, and the reviewer results are relayed back to us if they need to be corrected according to the input of the reviewer team.

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