

Peer facilitators's role to support pregnant women in utilizing HIV services during the COVID-19 pandemic

Artha Camellia¹, Plamularsih Swandari², Irwanto Irwanto³, Gusni Rahma⁴, Tuti Parwati Merati⁵

¹Department of Health, UNICEF Indonesia, Jakarta, Indonesia

²Department of Research and Community Centre, AIDS Research Center, Atmajaya University, Indonesia

³Department of Psychology, Faculty of Psychology, Atmajaya University, Yogyakarta, Indonesia

⁴Department of Public Health, STIKes Alifiah Padang, Padang, Indonesia

⁵Department of Public Health, Faculty of Medicine, Udayana University, Bali, Indonesia

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ABSTRACT

Human immunodeficiency virus (HIV) prevalence on pregnant women in Indonesia is estimated around 0.3%. The prevention of mother-to-child disease transmission (PMTCT) program has been implemented nationally since 2008, though, less than 50% of the total pregnant women each year get an HIV test and only 18% of those who are HIV positive get antiretroviral (ARV) treatment until now. COVID-19 pandemic, occurred since 2019, has brought significant changes to public health aspects including the utilization of HIV services. This study is aimed to determine factors influencing the PMTCT program services utilization during pandemic. This study used mix method approach with quantitative approach using a cross-sectional study design (174 HIV mothers from six provinces in Indonesia) and qualitative approach with in-depth interviews of 13 informants consisting of HIV mothers, health workers, program holders and peer facilitators. The results showed the HIV services utilization during pandemic was 52.3%. The most influenced factor was peer facilitators support (POR 2.96; 95% CI=1.45-6.03), HIV mothers who did not receive assistance from peer facilitators had 2.96 times chance of not utilizing the services compared to them who received. It requires to strengthen cooperation between health services and peer facilitators to support HIV mothers in accessing HIV services.

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Corresponding Author:

Artha Camellia

Department of Health, UNICEF Indonesia

World Trade Center, Tower 2, Lantai 22 Jend. Sudirman Street Kav. 29-31, Jakarta 12920, Indonesia

Email: acamellia@unicef.org

1. INTRODUCTION

Human immunodeficiency virus (HIV) is a virus that infects white blood cells which causes a person's immune system to weaken, thereby reducing the body's ability to counter infection and disease. Acquired immune deficiency syndrome (AIDS) is a collection of symptoms that arise due to decreased immunity caused by infection with HIV [1]. Until now, HIV/AIDS is still a public health problem. Based on data from the World Health Organization (WHO), there are 38.4 million people living with HIV in the world and 50% suffered by women and 1.7 million children living with HIV and there were at least 150,000 new HIV cases in children in 2019 [2].

A person suffering from HIV requires treatment with antiretroviral (ARV) to reduce the amount of the HIV virus in the body so that it does not get onto the AIDS stage and AIDS sufferers need ARV treatment

(ART) to prevent opportunistic infections and other complications. For pregnant women with HIV, adherence to ARV treatment will prevent HIV transmission from mother to child [1]. In Indonesia, the prevalence of HIV on pregnant women is estimated around 0.3% where there are more than five million pregnant women every year. So, there are around 12,000-15,000 babies born with HIV [3].

From pregnant women who are infected with HIV and do not receive appropriate early treatment will be infected with HIV and half of these children will die before the age of two. For HIV-infected infants, they must immediately receive long life ART (long life therapy). This is the main basis of mother-to-child HIV prevention programs, so that children can be born healthy without carrying diseases that can be transmitted during pregnancy, delivery and breastfeeding. According to the Convention on the Rights of Child, which was initiated by the United Nations Agency in 1989, every child has the right to obtain health services to ensure their life and future [4].

The government's effort to prevent mother-to-child transmission of HIV is through the prevention of mother-to-child transmission (PMTCT) program. This program is a comprehensive activity ranging from services, prevention, therapy to care for pregnant women and babies during pregnancy, delivery and after delivery [1]. The PMTCT (known also as prevention of transmission from mother to child) program activities involve various elements, namely the government, health workers, PMTCT program managers, community organizations as program supporters and women with HIV as the targets of the program. Community organizations as facilitators in the PMTCT program become government partners to assist women living with HIV in accessing the program at various stages of intervention. The support from the government and strengthening cooperation with NGOs are needed to encourage the sustainability of the HIV/AIDS program [5], [6].

Based on the PMTCT guidelines issued by the WHO (2016), pregnant women with HIV who take ARV therapy for at least six months, mother-to-child transmission of the HIV virus can be prevented by 95% and the number of infants infected with HIV can be minimized to less than 5%. ARV treatment before pregnancy (for women or mothers with HIV), during pregnancy (for women living with HIV and newly diagnosed), and during breastfeeding will prevent transmission of the virus to the baby. Therefore, adherence to antiretroviral therapy is the key to success because sustainable ARVs are able to suppress the HIV virus until it is undetectable and to prevent mother-to-child transmission [7]. In addition, it takes motivation and commitment to initiate and maintain therapy, especially for pregnant women who experience physical and psychological changes during pregnancy [8].

In 2019, the COVID-19 pandemic hit the world, a sizable impact was felt from the health sector, especially for people with HIV/AIDS. The thing that worries sufferers is visiting health services for fear of being infected with COVID-19, so that it can have an impact on drug withdrawal [9]. Several factors related to the utilization of health services are in terms of service hours, financing system, room comfort, confidentiality guarantees, officers attitude, social support, access to health services and availability of ARV drugs [9]–[11].

The progress of the 2019 PMTCT implementation was conveyed in the 2020 PMTCT annual evaluation meeting by the Directorate of Family Health of the Ministry of Health of the Republic of Indonesia. Based on HIV triple elimination data in 2019 from 5,250,125 pregnant women, 2,370,473 were tested for triple elimination (HIV, Syphilis and Hepatitis-B). There were 6,439 pregnant women with HIV positive and 2,131 pregnant women who were initiated and are on ART. The low utilization of medical services by pregnant women, especially during the COVID-19 pandemic underlies this research to understand factors that affect the utilization of PMTCT program services during the COVID-19 pandemic.

2. RESEARCH METHOD

This study used a mix method approach that was a combination of quantitative and qualitative approaches [12]. The quantitative approach used a cross sectional study design with a predictive model. Data collection was carried out in October-November 2020. It was carried out in the PMTCT work program areas within six provinces in Indonesia, namely Lampung, North Sumatra, DKI Jakarta, Central Java, Bali and West Papua. Data were collected through an online-based questionnaire using a Google Form.

The population in this study was all women in reproductive age (15-49 years) with HIV, pregnant women or breastfeeding mothers with HIV. The samples of 174 respondents were taken by purposive sampling. The inclusion criteria of the respondents are being able to read and write, having an android phone and are willing to be respondents in this study. There were 13 informants in this study consisting of six female clients with HIV, pregnant women with HIV and breastfeeding mothers with HIV; five health workers from HIV and Maternal Neonatal Health services (doctors, nurses, counselors, midwives) and two people from program holders and peer facilitators.

The dependent variable in this study was the utilization of PMTCT services and the independent variables were age, occupation, attitude of health workers, peer support, access to services and availability of ARV drugs. The data was collected using a questionnaire that had been tested for its validity and reliability with the results that all question items were valid (0.430-0.856) and reliable (0.950). Quantitative data analysis used data analysis software. Data were analyzed univariately, bivariate analysis used chi square test and multivariate analysis used logistic regression test, while qualitative analysis was carried out using technical triangulation methods or methods and source triangulation. The steps in analyzing quantitative data consisted of editing, coding, entry, cleaning, and output while in analyzing qualitative data consisted of reducing data, presenting data, drawing conclusions and verification. This research has been passed the ethical test from the Atma Jaya Indonesian Catholic University Research and Community Service Institute with the number 1233A/III/LPPM.PM.10.05/10/2020.

3. RESULTS AND DISCUSSION

Based on Table 1, it is known that out of 174 respondents, based on age, most of respondents were 35 years old or older (68.4%). There were 55.7% of respondents employed and 52.5% are utilizing PMTCT services during the COVID-19 pandemic. The survey also showed that 54.6% respondents identified negative attitudes of health workers towards HIV, and 67.8% has received support from peer facilitators. During the pandemic, 50% respondents found it difficult to access services and 57.5% stated that ARV drugs were not available (59%).

Table 1. Frequency distribution of the study subjects

Variable	Frequency (n=174)	Percentage
Age		
>35 years old	55	31.6%
≤35 years old	119	68.4%
Occupation		
Unemployed	77	44.3%
Employed	97	55.7%
PMTCT service utilization		
No	83	47.7%
Ya	91	52.3%
Health workers attitudes		
Negative	95	54.6%
Positive	79	45.4%
Peer facilitators support		
No support	56	32.2%
Supported	118	67.8%
Access to services		
Difficult	87	50.0%
Easy	87	50.0%
ARV drugs availability		
Unavailable	100	57.5%
Availabe	74	42.5%

Table 2 shows that the highest percentage of respondents who did not take advantage of PMTCT services during the COVID-19 pandemic was mostly found in respondents aged over 35 years (66.7%), unemployed (62.3%), identified negative attitudes of health workers (56.8%), experiencing dissuportive peer facilitators (62.5%), those who found difficulty in accessing services (60.9%), and respondents who stated that ARV drugs were not available (59%). There is a significant relationship between work, attitude of health workers, peer support, access to services and availability of ARV drugs with the utilization of PMTCT services during the pandemic ($p < 0.05$). There is no significant relationship between age ($p = 0.287$) and education ($p = 0.451$) with the utilization of the services during the pandemic.

Based on Table 3, the final model of univariate analysis using logistic regression, it was found that the variables that most influenced the utilization of PMTCT services during the COVID-19 pandemic, namely peer support, access to services and availability of ARV drugs. However, the most influencing variable was peer facilitators support with a prevalence odds ratio (POR) of 2.96 (95% CI 1.45–6.03). That means that mothers with HIV who did not receive assistance from peer facilitators had a 2.96 times chance of not utilizing PMTCT services during the pandemic compared to HIV mothers who were accompanied by peer facilitators.

Table 2. The relation between age, occupation, attitude of health workers, peer support, access to services and availability of ARV drugs with the utilization of PMTCT services

Variable	PMTCT service utilization				Total		POR (95% CI)	p-value
	No		Yes		n	%		
	n	%	n	%	n	%		
Age								
>35 years old	30	66.7%	15	33.3%	45	100.0%	1.49 (0.78-2.84)	0.287
≤35 years old	53	44.5%	66	55.5%	119	100.0%		
Occupation								
Unemployed	48	62.3%	29	37.7%	77	100.0%	2.93 (1.58-5.45)	0.001
Employed	35	36.1%	62	63.9%	97	100.0%		
Health workers attitude								
Negative	54	56.8%	41	43.2%	95	100.0%	2.27 (1.23-4.19)	0.013
Positive	29	36.7%	50	63.3%	79	100.0%		
Peer facilitators support								
No support	35	62.5%	21	37.5%	56	100.0%	2.43 (1.26-4.67)	0.011
Supported	48	40.7%	70	59.3%	118	100.0%		
Access to services								
Difficult	53	60.9%	34	39.1%	87	100.0%	2.96 (1.59-5.49)	0.001
Easy	30	34.5%	57	65.5%	87	100.0%		
ARV drugs availability								
Unavailable	59	59.0%	41	41.0%	100	100.0%	2.99 (1.59-5.62)	0.001
Available	24	32.4%	50	67.6%	74	100.0%		

Table 3. Multivariate analysis of the most affecting factors toward the utilization of PMTCT services

Variable	POR	95% CI	p-value
Peer facilitators support	2.96	1.45-6.03	0.003
Access to services	2.49	1.22-5.07	0.011
ARV drugs availability	2.19	1.08-4.47	0.030

HIV Non-Governmental or Civil Society Organizations (NGOs/CSOs) have been known to have voluntary peer support programs in various model and program, including in PMTCT. Their duties include, among others, is as a peer educator, who provide information and assistance to access services and ART. This can also be an entry point to approach and engage the families of female clients with HIV during home visits. In practice, NGOs will support clients in accessing HIV treatment and care services according to the client's condition.

“Since I joined in 2013, the delivery of ARV drugs has been running but not every month, if the client has problems, such as transportation costs, or cannot access them, we help to deliver, reminding them to come for check-up every three months. Home visits are quite frequent... if we go to the Puskesmas (health center) or hospital, we don't find the status of pregnant women with HIV or who are absent from control (visit), we will make home visit to check...” (Facilitator of HIV)

Peer support activities (*kelompok dukungan sebaya/KDS*) in health services were initiated through an MoU with the hospital management, particularly in accessing ARV drugs as not all primary health center (Puskesmas) can provide treatment. Although these peer facilitators were not on stand-by position at the hospital during service hours, they have been assigned to particular hospital and will be contacted when a pregnant woman with HIV is needing a support, usually by the doctor or HIV counselor. It is aimed that by receiving more information and support from a companion (the peer facilitator, who are also women with HIV), the pregnant women will be motivated to follow the therapy, and even bringing their partners for testing.

“...I admit that Sorong City is very good because there is support from Indonesian positive women association (ikatan perempuan positif Indonesia/IPPI), the most active is the peer facilitator. Mrs. Sulce (Health Office) also admitted that if there isn't support from IPPI, they would be troubled, when will the pregnant women take medicine, whether the drugs are still available or not...” (PMTCT Program Manager)

“..., we give an explanation to the pregnant woman, if you really don't want to be open to your partner, maybe your partner is positive. It's such a pity if it's not treated quickly. Someone asked for help to speak, so we asked a peer facilitator to help to talk.” (Health workers)

The role of the peer facilitators begins at the early stage of the program, since the patient administering the national health insurance (BPJS) to access service, accessing hospital to get ART, even until delivery. Health workers acknowledged how the support of peer facilitators has helped them in ensuring that preparation for the delivery can be done properly. In addition, peer facilitators also support mothers with HIV to adhere to ARV therapy.

“...But thank God, the service officer found it helpful. So, when we saw that there was a peer facilitator, the service officer only concentrated on the mother who gave birth, and we were asked questions, because the officer believed that if there was a peer facilitator, it was meant safety...”
(Peer Facilitator of HIV)

Nevertheless, PMTCT implementation still requires improvement in particular to ensure that HIV services (testing, treatment and care), can be accessed at the closest health services to service users, namely women with HIV [13]. The involvement of community organizations as government partners in supporting the the program plays an important role in encouraging efforts to achieve the goal of triple elimination of mother-to-child transmission of HIV, Syphilis and Hepatitis B [14]. Civil Society Organizations play a role in educating and assisting women with HIV in utilizing health services for the prevention of vertical transmission from mother to child and HIV-related treatment/care. The implementation of the PMTCT program involves various components from government and non-government elements, including community organizations or NGOs that are specifically involved in the HIV program as facilitators [15],[16].

From the results of this study, it was found that the presence of peer facilitators affected the utilization of PMTCT services, where mothers with HIV who were not supported by them had 2.96 times the opportunity to not utilizing the services. The results of this study are in line with Anok *et al.* who found that peer group support affected PLHIV's (People Living with HIV) compliance in taking ARV [17]. The results of this study are also supported by research by Rohmah and Budiati which reported that one of the factors that influenced mothers with HIV to access and utilizing PMTCT services was peer group support [18]. In contrast to the research of Beyene *et al.* and Linguissi *et al.* which found that the utilization of PMTCT services was influenced by support from male partners [19]–[22]. While Buregyeya *et al.* in his research found that the desire to have a baby that are not infected with HIV was the main motivation for HIV mothers to start treatment and adhere to therapy [23].

Several studies have documented the usefulness of technology in promoting adherence and improving motivation for successful ART retention. Omoniye *et al.* found that the use of electronic device for ART reminders, social and structural support, including education can potentially make impact in improving pregnant women with HIV adherence to treatment [24]. As a high level of adherence to treatment during pregnancy plays critical role to prevent HIV transmission from mothers to children as well as the health of the mothers themselves, innovative ways in delivering motivational messages can make substantial changes in the results. Sarna *et al.* in her study revealed that a tailored one-on-one counseling using cell phone was effective in promoting uptake of HIV testing, antenatal care, as well as treatment retainment of mothers with HIV [25].

Current national data shows that coverage of ARV treatment in pregnant women with HIV is relatively low (33%), compared to increased percentage of HIV testing (nearly 50%) in the past five years. This study found several internal factors that hindered women living with HIV in accessing HIV services are the courage to disclose their status, adhere to medication, and provide caring for children with HIV. Meanwhile, external factors that influence them to access services include stigma and negative perceptions of community on HIV, support from spouse/family, stigma and negative attitudes from health workers, and availability and accessibility of PMTCT services [19], [20], [26], [27]. The main challenges related to health facilities are types of services provided (testing, treatment, supportive care), and procedures or mechanisms to access services, including availability of national health coverage (BPJS) to access free services at public health facilities.

Peer Facilitators has become partners to health workers in overcoming the barriers/challenges experienced by women with HIV in accessing services, particularly at difficult times during the COVID-19 pandemic. These peer facilitators are continued to play the same roles as they did before the pandemic. However, the strategy in providing assistance is modified to follow government regulations related to health protocols, including use of mask and utilizing communication tools such as telephone calls, phone messaging and other contactless communication methods. In the end, the success of the PMTCT program will depend on ensuring women with HIV can access the services, initiated and adhere to ARV therapy, and adequately provided follow-on support for the newborns. The peer support program provides enormous benefits to pregnant women throughout the pregnancy. Facilitators' assistance to take monthly ARVs, provide information about the importance of PMTCT, support during the ARV treatment, and motivate the pregnant women to taking care of herself and pregnancy has been key factors to the success of the program [28]–[30]. Wanga *et al.* has shown that a community Mother Mentor approach was a useful and acceptable strategy to promote ART adherence and retention in PMTCT services for pregnant/post-partum women living with HIV

Peer facilitators's role to support pregnant women in utilizing HIV services during ... (Artha Camellia)

[31]. Similarly, this study showed that without peer support, pregnant women are three times likely to not utilizing PMTCT services, which can negatively impact the program and potentially resulted in increased newborn HIV.

4. CONCLUSION

The utilization of PMTCT services during the COVID-19 pandemic is influenced by peer facilitators support, access to services and the availability of ARV drugs. Peer facilitators plays an important role in motivating and monitoring ARV treatment uptake, which can be done virtually through messaging and video calls. With the mobilization restrictions applied by government during the pandemic, ARV drugs can be sent using online transportation to ensure that pregnant women are taking the therapy continuously.

The COVID-19 pandemic has further strengthened the importance of the role of peer facilitators for women living with HIV in accessing HIV prevention and treatment services. Conditions during the COVID-19 pandemic such as reduced service hours, mobility restrictions and fear of possible infection of COVID-19, has made the role of peer facilitators is increasingly needed, both in person and virtually. Further research is needed to identify the effectiveness of this community support model and its potential scale-up. This study warrants the importance to strengthen cooperation between health services and peer facilitators to support HIV mothers in accessing HIV services.

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BIOGRAPHIES OF AUTHORS






Artha Camellia     is a health specialist at UNICEF Indonesia. She has more than 15 years of experience working in public health, infectious diseases (HIV AIDS, Tuberculosis, avian influenza, SARS, MERS-Cov) and international development. Dr. Camellia currently is managing the HIV program with focus on prevention of mothers to child transmission and Triple Elimination of HIV, Syphilis and Hepatitis-B. She holds a medical doctor degree from Faculty of Medicine, University of Indonesia, Master of Health Administration from University of New South Wales, Sydney, Australia and Master of Public Health from Otago University, New Zealand. She was one of New Zealand Agency for International Development (NZAID) scholars in 2002-2005. She can be contacted at email: acamellia@unicef.org.






Plamularsih Swandari     received her first degree on Agriculture Technology and gained a master's degree on Management of Social Development. She has various works experience on Social Development. She worked on issues of child, disability, HIV AIDS, drugs and harm reduction. She has developed training modules, and a monitoring evaluation program using various assessment tools. Ms. Ndari has developed a strong relationship with various stakeholders, including local and international NGOS and government agencies in local and national level, key population networks and faith-based organizations, based on her passion for social justice. She has deep experience from working in the field and also involved and lead various research area. She can be contacted at email: pswandari@gmail.com.






Irwanto    was an alumnus of Faculty of Psychology from University of Gadjah Mada (1982) and recipient of Fulbright-Hays 1988-1992, when he completed his doctoral program at Department of Child Development and Family Studies, Purdue University, USA (1992). Prof. Irwanto is a pioneer in areas of child protection, narcotics and drug abuse, and policy analysis in poverty reduction. He has received outstanding awards for her work and dedication, and one of them was the Asia-Pacific Award for Outstanding Contribution to teaching Social Work (2006) by APASWE. In addition to serving as lecturer, Prof. Irwanto also an active researcher on topics related to stigma and discrimination. He has many experiences as consultant to international institutions and UN agencies including UNICEF, UNAIDS, ILO and Bappenas, and other bilateral development partners such USAID, AUSAID, dan GIZ. He can be contacted at email: irwanto_i@yahoo.com.



Gusni Rahma    is an alumni of Master program in Epidemiology, University of Indonesia (2018). Rahma is currently teaching public health program at STIKes Alifah Padang in Padang, West Sumatra. Her expertise includes Biostatistic, Public Health Surveillance, and Communicable Diseases Epidemiology. She is also actively involved as data analyst on researches related to PLHIV (people living with HIV) quality of life. Rahma is also one of the Ministry of Education, Research and Technology's (Kemendikbudristek) grant recipient for 2020-2022. She can be contacted at email: gusnirahma@gmail.com.



Ketut Tuti Parwati Merati    received her MD at the Faculty of Medicine, Udayana University, Bali in 1976. In 1984 she got her specialist in Internal Medicine from Airlangga University, Surabaya, and as Consultant in Tropical and Infectious Diseases in 1997. She completed her PhD in Biomedical Sciences in 2007. As an International Scholar, she was trained for research in HIV in 1992 at CAPS, University of California San Francisco. Since 2008 she became a professor and lecturer at Udayana University until now. Her commitment in HIV and AIDS –work started in 1987 when she's diagnosed the first AIDS case in Bali. She organised KABP research to developed AIDS education materials, and established YCUI (Yayasan Citra Usadha Indonesia), a non-governmental organization to educate people about AIDS in 1992. Currently, she is still active supporting research particularly on HIV prevention and social work in Bali and Indonesia. She joined multicountries research project-TREAT Asia HIV Observational Data base (TAHOD) since 2004 and involved as author in many publications of TAHOD study results. She can be contacted at email: tutiparwati@gmail.com.