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## Pregnant Women's Compliance in Preventing Mother to Child Transmission (PMTCT) Examination



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### Abstract

HIV infection during pregnancy not only threatens the health and safety of the mother, but can also pose a threat to the fetus. This is because pregnant women with HIV infection have a high risk of mother to child transmission (MTCT) or vertical transmission from mother to baby. This research was a descriptive study which aimed to see the compliance of pregnant women in PMTCT examinations. The population in this study was all pregnant women in the Sutojayan Community Health Center working area who had not taken a PMTCT examination. The sample in this study was 20 pregnant women who had not taken a PMTCT examination at the Sutojayan Community Health Center. The sampling technique used Accidental sampling. Inclusion criteria in this study include (1) pregnant women who had not taken a PMTCT examination, (2) being able to read and write. The instrument in this study used a questionnaire sheet containing compliance statements related to the PMTCT examination developed by the researcher. The data analysis method was by using a frequency distribution. This study was carried out from 10 to 19 April 2023. The results of this study showed that the majority of respondents in the compliant category in the PMTCT examination were 14 respondents (70%) and the number of respondents in the non-compliant category in the PMTCT examination was 6 respondents (30%). PMTCT examination is very important for pregnant women to reduce the risk of HIV transmission from mother to child.

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## INTRODUCTION

Acquired Immune Deficiency Syndrome (AIDS) is a disease caused by the Human Immunodeficiency Virus (HIV) which is transmitted through needle sticks, blood transfusions and from mother to baby. HIV can also be transmitted from an HIV positive mother to her baby during pregnancy and delivery, which is then known as Mother to Child Transmission (MTCT) or Mother to Child Transmission (PIA) (Yuriati et al., 2016). HIV infection during pregnancy not only threatens the health and safety of the mother, but can also pose a threat to the fetus. This is because pregnant women with HIV infection have a high risk of mother to child transmission (MTCT) or vertical transmission from mother to baby. Vertical transmission can occur during pregnancy, childbirth and during breastfeeding. More than 90% of HIV infections in babies from mothers suffering from HIV are obtained from vertical transmission from mother to baby (Tapa et al., 2023). More than 90% of babies are infected from mothers who suffer from HIV, newborn babies can be infected with the HIV virus which is transmitted from the mother while still in the womb through the placenta, HIV in neonates occurs due to transmission from the mother to the fetus during the womb or during the intrapartum period. postpartum, HIV is one of the health factors for mothers and babies (Mundriyastutik et al., 2022).

Indonesia is targeting 3 zeros by 2030, namely zero new infections, zero deaths related to AIDS and zero discrimination. This is in line with the target that the United Nations Program on Human Immunodeficiency Virus/Acquired Immunity Deficiency Syndrome (HIV/AIDS) (UNAIDS) wants to achieve by 2020, namely 90% of people who know their HIV status, 90% of people affected by HIV receive antiretrovirals (ART) and 90% of people who received antiretrovirals (ARV) experienced a reduction in viral load. Based on the 2018 UNAIDS report, in 2017 it was found that 80% of pregnant women living with HIV had access to antiretroviral drugs to prevent transmission of HIV to their babies. Based on data from the Ministry of Health (Kemenkes), in 2015 the number of women infected with HIV was 12,573, increasing in 2016 to 15,151 and decreasing in 2017 to 3,511. Currently, housewives are the third largest number of people living with HIV-AIDS (PLWHA) (Darlis et al., 2022). According to Betencourt et al (2010), 2-3 HIV positive pregnant women in developing countries do not have access to treatment to prevent HIV transmission. This results in 370,000 new HIV

cases among babies every year from 1.5 million HIV-positive pregnant women (Darlis et al., 2022). One of the government programs in an effort to transmit HIV from mother to child is PMTCT. At the United Nations General Assembly Special Session on HIV/AIDS (UNGASS, 2007) meeting, health experts committed to reducing 50% of babies infected with HIV/AIDS, as well as ensuring that 80% of pregnant women visit antenatal care (ANC) services to receive counseling and HIV/AIDS prevention services (Yuriati et al., 2016).

Non-compliance of pregnant women suffering from HIV causes failure in Mother Transmission to Child Transmission (MTCT) efforts (Darlis et al., 2022). At the end of 2016, there were 26,997 children born to HIV-infected mothers. HIV transmission does not only occur in breastfeeding mothers, but can also be transmitted to partners. By looking at this data, services to prevent HIV transmission from mother to child are increasingly becoming a concern. The risk of HIV transmission from mother to baby is increasing rapidly, namely around 24-25%. Even though the prevalence of HIV in women in Indonesia is only 16%, the majority of 92.54% of PLWHA are of productive age (15-49 years), so it is estimated that the number of HIV positive pregnancies will increase. Compliance with the PMTCT program is a concern considering that there are still many pregnant women living with HIV who do not follow the program properly. The increasing dropout rate in participating in the PMTCT program will further increase the rate of transmission of HIV/AIDS from mother to baby (Darlis et al., 2022). Initiation of female-focused PMTCT is a key strategy to prevent/reduce HIV infection in children. The PMTCT program not only reduces HIV transmission, but if implemented well as part of continuous care, this program can result in HIV-free survival, which means babies are protected from other causes of death (Mustapha et al., 2018). Based on the background description above, researchers are interested in conducting research on the Compliance of Pregnant Women in Prevention of Mother to Child Transmission (PMTCT) Examinations at the Sutojayan Community Health Center, Blitar Regency. It is hoped that the results of this research will be used as a reference in increasing PMTCT compliance so that prevention of HIV/AIDS transmission from mother to child can be optimal.

**METHODS**

This research was a descriptive study that describes the compliance of pregnant women in PMTCT examinations at the Sutojayan Community Health Center, Blitar Regency. The population in this study was all pregnant women in the Sutojayan Community Health Center area who had not taken a PMTCT examination. The sample in this study was 20 pregnant women who had not had a PMTCT examination at the Sutojayan Community Health

Center using a sampling technique, namely Accidental sampling. Inclusion criteria in this study include (1) pregnant women who have not had a PMTCT examination, (2) being able to read and write. The instrument in this study used a questionnaire sheet containing compliance statements related to the PMTCT examination developed by the researcher. The data analysis method was by using a frequency distribution. This study was carried out from 10 to 19 April 2023.

**RESULT**

Table 1 Frequency distribution of respondents based on education level, employment and pregnancy in the Sutojayan Community Health Center work area, Blitar Regency, August 2023

Variable		f	%
Education	No school	0	0
	Elementary school	0	0
	Junior high school	12	60
	Senior high school	2	10
	Akademic/college	6	30
Total		20	100
Job	Housewife	14	70
	Entrepreneur	1	5
	laborer	0	0
	Private employees	5	25
	Government employees	0	0
Total		20	100
Pregnancy	1st pregnancy	7	35
	2nd pregnancy	9	45
	3rd pregnancy	4	20
	4th pregnancy	0	0
	5th pregnancy	0	0
Total		20	100

Based on table 1, it shows that the majority of respondents had junior high school education, namely 12 respondents (60%). The frequency of respondents based on occupation is that the majority of respondents are housewives, namely 14 respondents (70%) and almost half of the respondents are with their second pregnancy, namely 9 respondents (45%).

Table 2 Frequency distribution based on compliance of pregnant women in PMTCT (Prevention of Mother to Child Transmission) examinations in the work area of the Sutojayan Community Health Center, Blitar Regency, August 2023

No	Compliance PMTCT	f	%
1	Not obey	6	30
2	Obedient	14	70
Total		20	100

Table 2 shows that the majority of respondents complied with the PMTCT examination, namely 14 respondents (70%).

Table 3 Cross tabulation of education, employment and pregnancy levels with compliance in PMTCT examinations in the Sutojayan Community Health Center work area, Blitar Regency, August 2023

Varibel		Compliance PMTCT					
		Obedient		Not Obey		Total	
		f	%	f	%	f	%
Education	Junior high school	4	20	7	35	11	55
	Senior high school	1	5	2	10	3	15
	Akademic/college	1	5	5	25	6	30
Total		6	30	14	70	20	100
Job	Housewife	5	25	9	45	14	70
	Entrepreneur	0	0	1	5	1	5
	Private employees	1	5	4	20	5	25
Total		6	30	14	70	20	100
Pregnancy	1st pregnancy	2	10	5	25	7	35
	2nd pregnancy	2	10	7	35	9	45
	3rd pregnancy	2	10	2	10	4	20
Total		6	30	14	70	20	100

Based on table 3, the results show that almost half of the respondents with junior high school education did not comply with the PMTCT examination, namely 7 respondents (35%). Most of the respondents who did not comply with the PMTCT examination were housewives, namely 9 respondents (45%). Meanwhile, almost half of the respondents who did not comply were respondents with their second pregnancy, namely 7 respondents (35%).

## DISCUSSION

Based on table 2, it shows that the majority of respondents complied with the PMTCT examination, namely 14 respondents (70%). Almost half of the respondents with junior high school education did not comply with the PMTCT examination, namely 7 respondents (35%). Most of the respondents who did not comply with the PMTCT examination were housewives, namely 9 respondents (45%). Meanwhile, almost half of the respondents who did not comply were respondents with their second pregnancy, namely 7 respondents (35%).

The results of this research are in line with research by Wibowo & Priyatno (2019) regarding the description of compliance with examinations for the prevention of HIV transmission from mother to child at Puskesmas II, Baturaden District in January to July 2018, where the results showed that non-compliance in PMTCT examinations were mostly respondents at a high level. elementary school (SD) education is 73%, where elementary school is equivalent to junior high school which is the basic education level in the education system in Indonesia (Wibowo & Priyatno, 2019). Another study on the relationship between characteristics of pregnant women and HIV testing with a total of 34 respondents found that the majority of respondents, namely 11 (57.9%) respondents who had not been tested for HIV during pregnancy, were respondents

with low education (Dwi Ertiana, 2020). Researchers assume that the level of education is very influential in a person's decision making, especially the decision to undergo a PMTCT examination.

Most of the respondents who did not comply with the PMTCT examination were housewives, namely 9 respondents (45%). If we look at work, the results of this research are in line with research by Wibowo & Priyatno (2019) which states that the highest level of non-compliance is for domestic workers, namely 59% and private employees, 45%. This means that a person's level of work is relevant to their level of education, supporting a person's compliance with carrying out a PMTCT examination as an effort to prevent HIV/AIDS. Setiawan (2011) in Wibowo & Priyatno (2019) states that a person with a higher level of education and a higher job, the better the level of utilization of the PMTCT program, and vice versa, the lower a person's job level, the lower the level of compliance. in the PMTCT examination (Wibowo & Priyatno, 2019). The results of other research also show that pregnant women who have not undergone an HIV test during pregnancy are pregnant women in the unemployed category, namely 12 respondents (63%) (Dwi Ertiana, 2020). So, it can be concluded that work indirectly influences a person's knowledge which of course will influence a person's compliance.

However, in the same study these results were contradictory when viewed from the perspective of the mother's pregnancy. According to Soeditama (2006); Fuji (2010) stated that in the first and second pregnancies pregnant women will have more control over their condition and know the benefits of PMTCT so that pregnant women are able to anticipate emergency cases during pregnancy (Wibowo & Priyatno, 2019). Other research also shows that most of the pregnant women who underwent PMTCT examinations were multigravida pregnant women, namely 58 respondents (63.7%) out of 91 respondents, while the remaining 33 respondents (36.%) had primigravida status (Awaliyah, 2019).

One of the government's efforts to prevent the transmission of the HIV virus from mothers to their unborn babies is the Prevention Mother to Child Transmission (PMTCT) program. Based on the Management Guidelines for Programs for Preventing Transmission of HIV and Syphilis from mother to child, transmission prevention programs are carried out in every health service, especially first level health services, namely Community Health Centers (Suhartati & Amelia, 2018). HIV prevention education efforts from mothers and children can be shared using social media. Posters or videos can be shared on social media platforms to reach the targets of the triple elimination program which is designed to end mother-to-child transmission of HIV. Utilization of technology is also needed to reduce loss to flow up (LTFU) and maintain compliance through reminder messages in chatgroups or SMS (Sort Messages Service). Apart from that, there is a need for a computerized database and/or treatment summary containing the history of pregnant women who access PMTCT services, such as test date, test results, treatment referral places, drug regimens, and opportunistic history to reduce duplication of visits (Dinda Syifa Al Adila & Milla Herdayati, 2022).

## CONCLUSION

The majority of respondents in the compliant category in the PMTCT examination were 14 respondents (70%) and the number of respondents in the non-compliant category in the PMTCT examination was 6 respondents (30%).

## SUGGESTION

1. Educational Institutions  
It is hoped that the results of this research can be used as a reference in creating study materials related to preventing HIV from pregnant women to children.
2. Public Health Center  
This research can be used as input for community health centers to be more intensive in socializing the PMTCT program to reduce the rate of HIV transmission in pregnant women.
3. Further Research  
The results of this research can be used as a basis for further research related to preventing infectious diseases from pregnant women to children.

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## CONFLICT OF INTEREST

The authors have no conflict of interest in publishing the article.

## AUTHOR CONTRIBUTIONS

All authors contributed fully to research activities starting from creating activity concepts, managing tabulated data, writing manuscript drafts and analysis. Each author made a positive contribution to this activity from start to finish including publishing articles in this journal.

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