



# Interaction of Knowledge and HIV Test Intention Regarding HIV Tests and Breastfeeding Decisions

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**Abstract:** HIV transmission from mother to child tends to increase from year to year. One of the important ways of transmitting HIV is transmission from mother to fetus, however many pregnant women do not have the opportunity and information about HIV/AIDS and counseling services. This type of research is survey research. The population in this study was all pregnant women in the city of Balikpapan for the period 2021 - 2022 totaling 1.42 people. The sample in this study was pregnant women and met the inclusion and exclusion criteria. The results of the statistical test concluded that there was an interaction that had a significant and positive influence on HIV testing and the decision to provide breast milk in the city of Balikpapan, the knowledge factor influenced the seriousness that pregnant women felt about HIV/AIDS in carrying out HIV testing. Pregnant women who have high knowledge about HIV/AIDS will feel a very strong sense of seriousness about HIV/AIDS so with the seriousness they feel, the pregnant mother will be encouraged to carry out an HIV test. There are still many pregnant women who have low knowledge and do not undergo HIV testing because the education level of the respondents is still low, most of whom have a high school education or less.

**Keywords:** HIV test; intention; knowledge

## Introduction

Human Immunodeficiency Virus (HIV) is a Ribonucleic Acid (RNA) virus that specifically attacks the human immune system and causes Acquired Immunodeficiency Syndrome (AIDS) (Bobbin et al., 2015). HIV positive is a person who has been infected with HIV and the body has formed antibodies (anti-substances) against the virus (Awamura et al., 2023). They have the potential to be a source of infection for other people, AIDS (Acquired Immunodeficiency Syndrome/SIDA) is a collection of clinical symptoms due to a decrease in the immune system resulting from HIV infection. AIDS often manifests with the emergence of various opportunistic infectious diseases, malignancies, metabolic disorders, and others (Barbaro, 2002).

In 2018, the World Health Organization (WHO) recorded that the number of HIV/AIDS sufferers throughout the world had increased to 5.2 million

people. Even though in 2010 there were only 1.2 million people (Tsao et al., 2022). Data from the Ministry of Health in 2013 shows that of the 21.10 pregnant women who underwent HIV testing, 534 (2.50%) of them were positive for HIV infection. The results of the Ministry of Health's 2012 HIV Epidemic Mathematical Modeling show that HIV prevalence in the population aged 15-49 years and HIV prevalence in pregnant women in Indonesia is expected to increase. The number of HIV and AIDS cases is expected to increase from 591.82 (2012) to 785.82 (2016), with the number of new HIV infections increasing from 71.87 (2012) to 90.91 (2016). Meanwhile, the number of AIDS-related deaths in the population aged 15-49 years will almost double in 2016 HIV transmission from mother to child tends to increase from year to year.

One of the important ways of transmitting HIV is transmission from mother to fetus, however many pregnant women do not have the opportunity and

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information about HIV/AIDS and counseling services (Makunyane et al., 2017). Therefore, the government has made efforts to prevent vertical transmission by implementing the Prevention of Mother-to-Child Transmission of HIV (PMTCT) program. When checking the contents with a health worker, information about HIV/AIDS and its transmission is included (Marheni Putri et al., 2021). After receiving education and counseling, voluntary HIV testing can also be carried out with the mother's consent. This is reinforced by the Minister of Health's regulation: SK/Menkes/001/I/2013 concerning Services for the Prevention of Mother-to-Child Transmission of HIV (PMTCT) which integrates HIV testing with KIA-KB services (Phanuphak & Phanuphak, 2016).

Transmission of HIV from HIV-infected mothers to their babies tends to increase along with the increasing number of HIV-positive women who become infected either from partners or as a result of risky behavior (Yah & Tambo, 2019). Although the prevalence and transmission of HIV from mother to baby is still limited (Chilaka & Konje, 2021), the number of pregnant women infected with HIV tends to increase (Potty et al., 2019). HIV prevalence in pregnant women is projected to increase from 0.38% (2012) to 0.49% (2016), and the number of HIV-positive pregnant women who require PMTCT services will also increase from 13.19 people in 2012 to 16.19 people in 2016 (Ndege et al., 2016; Muthelo et al., 2020).

## Method

This type of research is survey research, with a cross-sectional study design, to study relationships and exposure by observing information on exposure status and treatment-seeking patterns measured over the same time or period (Jilcha Sileyew, 2020). The research was conducted in Balikpapan City, East Kalimantan Province, in May - June 2022. The population in this study was all pregnant women in the city of Balikpapan for the period 2021 - 2022 totaling 1,425 people. The sample in this study was pregnant women who came to have their pregnancy checked in the city of Balikpapan and met the inclusion and exclusion criteria.

## Result and Discussion

The results of the statistical test concluded that there was an interaction that had a significant and positive influence on HIV testing and the decision to provide breast milk in the city of Balikpapan, the knowledge factor influenced the seriousness that pregnant women felt about HIV/AIDS in carrying out

HIV testing. Pregnant women who have high knowledge about HIV/AIDS will feel a very strong sense of seriousness about HIV/AIDS so with the seriousness they feel, the pregnant mother will be encouraged to carry out an HIV test (Ndubuka et al., 2013).

This is the same as what was done by (Geerligts et al., 2018), there was an increase in respondents' interest in utilizing health services after the intervention was carried out. Respondents' knowledge was very low regarding VCT, only 4%. After the intervention, knowledge increased to 52%. The increasing knowledge of respondents regarding HIV/AIDS affects respondents' intentions to carry out VCT (Mohlabane et al., 2016). Research results that show moderate knowledge and no intention of carrying out an HIV test can also be influenced by several factors, including those mentioned by the Protection Motivation Theory theory (Huang et al., 2021), which states that the intention to behave related to health is formed by 4 components, namely from how big the threat or level of seriousness is. Someone about HIV/AIDS, the greater the perception that this severity is, the higher the person's intention to carry out VCT (Gu et al., 2015).

Then vulnerability to HIV/AIDS focuses on a person's subjective perception of how vulnerable the risk of HIV/AIDS is to them (Ecker et al., 2022). The higher a person's perceived susceptibility to HIV/AIDS, the higher the person's intention to carry out an HIV test (Liu et al., 2022). Then, the level of effectiveness of the response to the HIV test is based on the belief that a person has that the HIV test is a preventive effort to determine their health status regarding HIV/AIDS (Shamu et al., 2020). Lastly is self-confidence or ability. Every person who has high self-confidence will be confident to change their behavior by the recommendations given. In this case, be sure to do an HIV test (Fiana, 2020).

Other things that can influence pregnant women not to test for HIV include culture and stigma (Sakala et al., 2021). The culture here still does not consider that preventative efforts to carry out HIV testing are not important. You should be able to have high self-awareness considering that the area where you live is an area close to the localization area which does not rule out the possibility of being susceptible to HIV/AIDS (Ramjee & Daniels, 2013). Then there is a negative stigma that develops in society (Elsiddig Elsheikh et al., 2022). HIV is seen as an infectious disease where sufferers are considered scary. Therefore, they assume that if they carry out the examination, people around them will be labeled as having the potential for HIV/AIDS or being positive for HIV/AIDS.

According to the Okonji et al. (2020), counseling activities aim to reduce public stigma about HIV/AIDS by providing psychological support, information, and knowledge of HIV/AIDS, preventing HIV transmission, promoting responsible behavior change, ARV treatment, and ensuring the resolution of various problems related to HIV/AIDS.

## Conclusion

There are still many pregnant women who have low knowledge and do not undergo HIV testing because the education level of the respondents is still low, most of whom have a high school education or less. Usually, the level of knowledge is closely related to a person's level of education, giving rise to erroneous assumptions about the importance of getting tested for HIV during pregnancy.

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## Author Contributions

Conceptualization, R. K., N. M., T. B., V. K. D., J. J.; methodology, R. K.; validation, N. M. and T. B.; formal analysis, V. K. D.; investigation, J. J., and R. K.; resources, N. M. and T. B.; data curation, V. K. D.; writing—original draft preparation, J. J. and R. K.; writing—review and editing, N. M.; visualization, and T. B. and V. K. D. All authors have read and agreed to the published version of the manuscript.

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## Conflicts of Interest

No Conflicts of interest.

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