

## Relationship Between Information Sources and Pregnant Women's Interest in Undergoing PMTCT

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Kata Kunci: Sumber informasi, Minat, PMTCT, Ibu Hamil	Kasus HIV/AIDS masih menjadi permasalahan kesehatan serius di Indonesia, khususnya terkait dampaknya terhadap ibu dan bayi. Penularan HIV dari ibu ke anak dapat dicegah melalui program <i>Prevention of Mother to Child Transmission</i> (PMTCT). Keberhasilan program ini dipengaruhi oleh akses ibu hamil terhadap sumber informasi yang berkualitas dan mudah dipahami, yang dapat meningkatkan minat serta kecenderungan perilaku dalam mengikuti layanan PMTCT. Penelitian ini bertujuan untuk mengetahui hubungan sumber informasi dengan minat ibu hamil melakukan PMTCT di Puskesmas Gamping I Yogyakarta. Penelitian menggunakan desain <i>cross-sectional</i> dengan analisis Spearman's Rank Correlation. Responden penelitian adalah ibu hamil yang memenuhi kriteria inklusi. Hasil penelitian menunjukkan sebagian besar responden berusia 20–35 tahun (52,8%), berpendidikan SMA/SMK (68%), tidak bekerja (88,8%), multigravida (51,2%), dan berada pada trimester II (48,0%). Sebagian besar responden memiliki sumber informasi dalam kategori baik (52,8%) dan minat tinggi terhadap PMTCT (78,4%). Uji statistik menunjukkan terdapat hubungan bermakna antara sumber informasi dengan minat ibu hamil melakukan PMTCT ( $r = 0,350$ ; $p < 0,001$ ). Temuan ini menunjukkan bahwa kualitas dan akses sumber informasi berperan penting dalam meningkatkan minat ibu hamil mengikuti program PMTCT. Upaya promotif dan preventif perlu difokuskan pada peningkatan kualitas serta akses informasi PMTCT melalui berbagai media dan pendekatan langsung oleh tenaga kesehatan.
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Date received: 13 January 2026	HIV/AIDS remains a serious health problem in Indonesia, particularly in relation to its impact on mothers and infants. Mother-to-child transmission of HIV can be prevented through the Prevention of Mother-to-Child Transmission (PMTCT) program. The success of this program is influenced by pregnant women's access to quality and easily understood information sources, which can increase their interest and behavioral tendencies in participating in PMTCT services. This study aims to determine the relationship between information sources and pregnant women's interest in PMTCT at the Gamping I Community Health Center in Yogyakarta. The study used a cross-sectional design with Spearman Rank Correlation analysis. The study respondents were pregnant women who met the inclusion criteria. The results showed that most respondents were aged 20–35 years (52.8%), had a high school/vocational high school education (68%), were unemployed (88.8%), were multigravida (51.2%), and were in their second trimester (48.0%). Most respondents had good information sources (52.8%) and had a high interest in PMTCT (78.4%). Statistical tests showed a significant relationship between information sources and pregnant women's interest in PMTCT ( $r = 0.350$ ; $p < 0.001$ ). This finding suggests that the quality and access to information sources play a significant role in increasing pregnant women's interest in PMTCT. Promotional and preventive efforts need to focus on improving the quality and access to PMTCT information through various media and direct approaches by health workers.
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Page: 144-155	

**Introduction**

The World Health Organization (WHO) (2024) states that Human Immunodeficiency Virus (HIV) or Acquired Immunodeficiency Syndrome (AIDS) is still a serious problem in the world because it has an impact on the physical, psychological, social, and economic health of sufferers. HIV is a virus that attacks the human immune system so that the body becomes susceptible to various opportunistic infectious diseases and can cause death (UNAIDS, 2023). HIV transmission can occur through unprotected sexual intercourse, alternating use of syringes, blood transfusions, and from pregnant women to their babies during pregnancy, childbirth, or breastfeeding (Ministry of Health of the Republic of Indonesia, 2024). The WHO (2024) reports that in 2023 there will be 39.9 million people in the world living with HIV, with 1.3 million new infections and 630,000 deaths due to AIDS. In Indonesia, HIV cases also show an increasing trend every year. Based on data from the Ministry of Health of the Republic of Indonesia (2024), the number of people living with HIV has reached 570,000 people. The Yogyakarta Special Region Health Office (2024) reported that from 1993 to June 2024 there were 8,195 HIV cases in Yogyakarta, with 92 new cases in the January-September 2024 period, and Sleman Regency as the region with the highest number of cases, namely 2,270 HIV-positive cases. The high rates of HIV globally, nationally, and regionally indicate that HIV remains a serious public health problem. Therefore, research is needed to examine the factors that affect the effectiveness of prevention efforts, especially in vulnerable groups such as pregnant women, who are at risk of transmitting HIV to babies through pregnancy, childbirth, or breastfeeding.

Mother-to-Child HIV Transmission (MTCT) is one of the main causes of the increase in HIV cases in children (Witarini, 2021). Transmission can occur during pregnancy, during childbirth, or through breastfeeding. The risk of mother-to-child HIV transmission without preventive measures can reach 20–50%, but it can be reduced to less than 2% with the optimal implementation of the Prevention of Mother to Child Transmission (PMTCT) program (Danarko et al., 2024). The PMTCT program is one of the strategic efforts to prevent HIV transmission from mother to baby with the aim of preventing HIV infection in women of reproductive age, preventing unplanned pregnancies in HIV-positive women, preventing transmission from mother to baby, and providing treatment and care support for mothers and children (Ministry of Health of the Republic of Indonesia, 2021). The importance of the role of

information in the implementation of the PMTCT program is in line with the theory of health communication and the theory of behavior change, which states that accurate, easy-to-understand, and relevant information can influence the knowledge, attitudes, and perception of individual risks, thereby encouraging the formation of positive health behaviors. Although the PMTCT program has been implemented in various health care facilities, the interest of pregnant women to get HIV testing as part of the PMTCT program is still low. This is due to various factors, including lack of knowledge, fear of examination results, social stigma, and limited sources of information received (Nasronudin, 2020). Good sources of information are very helpful for pregnant women to understand the importance of HIV screening during pregnancy, form positive perceptions, and foster interest in participating in the PMTCT program (Johnson et al., 2020; Nsibande et al., 2024). Lack of access to quality and easy-to-understand information sources can cause fear and low participation of pregnant women in programs to prevent mother-to-child transmission of HIV. Therefore, further research needs to expand understanding of the types of information sources that are most effective in increasing pregnant women's participation in PMTCT programs, including the use of social media, technology-based counseling, and other innovative communication approaches.

Research conducted by Larasaty and Indri (2021) showed that as many as 43.3% of pregnant women were not interested in HIV screening due to a lack of adequate information and understanding of PMTCT. In the study, it was found that the interest of pregnant women is influenced by the access and quality of information sources received, as well as other factors such as the level of education and knowledge. The same thing was also expressed by Safrina et al. (2024) who stated that HIV/AIDS literacy plays an important role in shaping the understanding and motivation of pregnant women. However, there is still a need for a more in-depth analysis of the types of information sources that are most effective in Indonesia, including those that are locally-based and culturally value-oriented, as well as considering other variables such as social stigma and education level that may affect the interest of pregnant women in HIV screening. This study aims to determine the relationship between information sources and the interest of pregnant women in doing PMTCT. Overall, this study makes an important contribution by highlighting the influence of the quality and accessibility of information sources on the interest of pregnant women in participating in the PMTCT program. The results of this

study also provide direction for improving the quality and provision of information through health workers and educational media, so as to increase the participation of pregnant women in preventing HIV transmission from mother to child.

### **Method**

This research method uses a quantitative research method with a *cross-sectional* research design. *Cross-sectional* approach, which is the collection of data on free variables and bound variables that are carried out at a certain time without *follow-up*. This design aims to find out the relationship between variables, but it has limitations because it cannot explain the causal relationship between the variables being studied. The place of this research is the Gamping I Health Center in Yogyakarta. This research will be carried out in October 2025. The population in this study is all pregnant women who carry out pregnancy checks at the Gamping I Yogyakarta Health Center. The number of samples of 125 respondents was determined using *the total sampling* method, namely all pregnant women who met the inclusion criteria during the study period were included as respondents. The selection of *the total sampling method* was carried out because the number of populations was affordable and it was possible to involve the entire population, so that the results of the study were considered representative of the population of pregnant women at the research site. However, the use of *total sampling* in one health care facility has the potential to cause limitations in generalizing research results to a wider population of pregnant women. In addition, inclusion criteria that require reading skills and access to technology have the potential to cause selection bias, so that the results of the study are more representative of pregnant women who have adequate literacy and access to information. This study used a modified information source questionnaire from Delzaria (2021) and a questionnaire on the interest of pregnant women doing PMTCT modified from Situmorang (2021). Modification of the instrument was carried out by adjusting the language and context of pregnant women's health services to suit the conditions of the PMTCT program in first-level health care facilities. The instrument validity test was carried out using *the Pearson Product Moment* correlation test and all statement items were declared valid. The reliability test showed that the information source questionnaire had a Cronbach's Alpha value of 0.721 with a total of 20 statement items, while the questionnaire of interest of pregnant women conducting PMTCT

had a Cronbach's Alpha value of 0.928 with a total of 19 statement items, which indicates that both instruments have a good to very good level of reliability and are suitable for use in the study. The data analysis in this study includes univariate and bivariate analysis. Univariate analysis was used to provide an overview of respondent characteristics including maternal age, education level, occupation, parity, and gestational age, as well as an overview of information sources and interest of pregnant women in conducting PMTCT at the Gamping I Health Center in Yogyakarta. Bivariate analysis was used to determine the relationship between the independent variable of the information source and the interest-bound variable of pregnant women performing PMTCT using the Spearman's Rank Correlation test. The Spearman test was chosen because the data is ordinal-scale and not normally distributed, making it suitable for analyzing relationships between variables. In this study, several *confounding factors* have been identified based on theoretical studies, including pregnant women's knowledge of PMTCT, access to health care facilities, social support from spouses and families, and stigma against HIV.

These factors have the potential to affect the relationship between information sources and pregnant women's interest in PMTCT, but they have not been statistically controlled because this study has not used multivariate analysis. Therefore, the results obtained are associative and need to be interpreted carefully. Further research is suggested using multivariate analysis, such as regression, to control the influence of these confounding factors. The selection of Gamping I Yogyakarta Health Center as the location of the research was based on the condition of the Sleman Regency area which was recorded to have the highest number of HIV cases in the Special Region of Yogyakarta Province. In addition, the Gamping I Health Center is a first-level health service facility that provides PMTCT services with adequate coverage of pregnant women's visits, so it is considered relevant to examine the relationship between information sources and pregnant women's interest in doing PMTCT. However, the results of this study mainly represent the condition of pregnant women in the working area of the Gamping I Yogyakarta Health Center and have limitations in generalization to other regions with different characteristics.

## Research Results

### Respondent Characteristics

Table 1. Frequency Distribution Based on Mother's Age

Category	Frequency	Percentage
High Risk (< 20 Years or > 35 Years)	59	47.2%
Ideal (20-35 Years)	66	52.8%
Total	125	100

Based on table 1, it is known that most of the respondents are in the ideal age category (20-35 years) as many as 66 people (52.8%), while pregnant women with high risk age (<20 years or >35 years) are 59 people (47.2%).

Table 2. Frequency Distribution Based on Education

Category	Frequency	Percentage
High School/Vocational School	85	68%
D3/S1	40	32%
Total	125	100

Based on table 2, it is known that most of the respondents have a high school/vocational education level of 85 people (68%), while respondents with D3/S1 education are 40 people (32%).

Table 3. Frequency Distribution by Job

Category	Frequency	Percentage
Not Working	111	88.8%
Work	14	11.2%
Total	125	100

Based on table 3, it shows that most of the respondents are not working, namely 111 people (88.8%), while those who work are 14 people (11.2%).

Table 4. Frequency Distribution Based on Maternal Parity

Category	Frequency	Percentage
Primigravida	61	48.8%
Multigravida	64	51.2%
Total	125	100

Based on table 4, it is known that most of the respondents are multigravids as many as 64 people (51.2%), while primigravida as many as 61 people (48.8%).

Table 5. Frequency Distribution by Gestational Age

Category	Frequency	Percentage
Trimester I	47	33.3%
Trimester II	60	48.0%
Trimester III	18	14.4%
Total	125	100

Based on table 5, it is known that most of the respondents are in the second trimester of pregnancy age as many as 60 people (48.0%), then the first trimester as many as 47 people (33.3%), and the third trimester as many as 18 people (14.4%).

Table 6. Frequency Distribution of Information Sources

Category	Frequency	Percentage
Good	66	52.8%
Enough	53	42.4%
Less	6	4.8%
Total	125	100

Based on table 6, it is known that most of the respondents have good sources of information as many as 66 people (52.8%), sufficient as many as 53 people (42.4%), and less than 6 people (4.8%).

Table 7. Distribution of the Frequency of Interest of Pregnant Women in Doing PMTCT

Category	Frequency	Percentage
Height	98	78.4%
Medium	18	14.4%
Low	9	7.2%
Total	125	100

Based on table 7, it is known that most of the respondents have high interest in conducting PMTCT, namely 98 people (78.4%), while medium interest is 18 people (14.4%), and low interest is 9 people (7.2%).

Table 8. Correlation of Spearman Rank Between the Relationship of Information Sources and the Interest of Pregnant Women in PMTCT

Spearman's rho	Results
N	
Correlation Coefficient	0.350**
p value	< 0.001

Table 8 Based on the results of the analysis, the value of the Spearman correlation coefficient ( $\rho$ ) was 0.350 with a significance value (p-value) of < 0.001 ( $p < 0.05$ ). The correlation coefficient of 0.350 indicates a moderate and positive relationship between the source of information and the interest of pregnant women in PMTCT. This means that the better the source of information received by pregnant women, the higher the mother's interest in doing PMTCT, and vice versa. A p-value of < 0.001 indicates that this relationship is statistically significant, so it can be concluded that there is a meaningful relationship between the two variables. There is a moderate and significant positive relationship between the source of information and the interest of pregnant women in doing PMTCT. This shows that increasing

access and quality of information sources has the potential to increase the interest of pregnant women in participating in the prevention of mother-to-child HIV transmission (PMTCT) programs.

### **Discussion**

The results of the study showed that most pregnant women at the Gamping I Yogyakarta Health Center had information sources in the good category (52.8%). Sources of information that are easily accessible, clear, and come from health workers or credible media play a role in increasing pregnant women's understanding of the benefits and procedures of PMTCT, thereby encouraging interest in participating in the program (Safrina et al., 2024). These findings are in line with research by Purba et al. (2023) and Ismail et al. (2023) which emphasized that the quality of communication and education from health workers affects the understanding and interest of pregnant women in conducting HIV testing as part of PMTCT. Purba et al. (2023) showed that the variation in pregnant women's understanding of HIV and VCT was influenced by the intensity and clarity of education, while Ismail et al. (2023) emphasized that structured education in the triple elimination program was able to increase the coverage of HIV testing and enable the prevention of HIV transmission early on. However, the relationship between information sources and pregnant women's interest in doing PMTCT can also be influenced by other factors, such as perception of HIV, level of knowledge, and social stigma that is still developing in society. Stigma and negative perceptions of HIV have the potential to cause fear or reluctance in pregnant women to access PMTCT services, even if the information received is adequate.

Knowledge about PMTCT obtained from good sources of information plays an important role in shaping the interest of pregnant women to participate in the prevention program of HIV transmission from mother to child. Based on *the Health Belief Model* (HBM), individuals will be encouraged to carry out health behaviors if they have a good perception of the vulnerability and seriousness of the disease, as well as understand the benefits of preventive measures. Accurate and easy-to-understand information helps pregnant women increase the perception of the risk of HIV transmission from mother to child as well as the benefits of participating in the PMTCT program, thus having a positive impact on pregnant women's

interests and decisions (Zegeye et al., 2022). In addition, health communication theory emphasizes that the effectiveness of health messages is greatly influenced by the credibility of the source of information, the clarity of the message, and the intensity of information exposure. Information obtained from health workers and credible media has been proven to be able to increase the knowledge and awareness of pregnant women on the importance of PMTCT examinations (Elsheikh et al., 2023). The results showed that most pregnant women had high interest in doing PMTCT, namely 98 respondents (78.4%), followed by moderate interest as many as 18 respondents (14.4%) and low interest as many as 9 respondents (7.2%). The high interest of pregnant women is related to a good level of knowledge and a positive attitude towards HIV/AIDS. According to health behavioral theory, positive knowledge and attitudes play a role as predisposing factors that can increase individual motivation to carry out preventive behaviors, including participating in the PMTCT program (Fitriana et al., 2021). Other factors such as health worker support, economic status, and education also affect the level of interest of mothers in doing PMTCT (Astawesegn et al., 2022; Astawesegn et al., 2024).

The results showed a value of  $\rho$  value  $< \alpha$  (0.05), which indicates a relationship between the source of information and the interest of pregnant women in doing PMTCT, with a correlation coefficient of 0.350 which is in the medium category. This shows that information sources play a role in increasing the interest of pregnant women, but the influence is not dominant because it is still influenced by other factors such as local culture, stigma against HIV, family support, and limited access to health services. Clear and reliable information, especially from health workers, helps pregnant women understand the benefits and procedures of PMTCT so as to encourage interest in participating. These findings are in line with Cahyani et al. (2024), Pangestuti and Lestari (2023), and Nurdin et al. (2024) who emphasized that the quality and intensity of education affect the interest in HIV testing in pregnant women. Theoretically, the results of this study support health communication theory and health behavioral theory which states that effective information delivery can influence attitudes and interest in health behavior. The practical implication is that health workers need to optimize more personalized counseling, the use of educational media, and the use of technology such as social media or health applications to increase access to PMTCT information. This study has limitations because it uses *a cross-sectional design*, the potential for sample bias, and the limitation of generalization

because it was conducted at the Gamping I Yogyakarta Health Center which was selected based on the high number of HIV cases in the Sleman area. Therefore, further research is recommended using a *mixed methods* approach and involving a wider area.

### **Conclusion**

Based on the results of the research and discussion of the relationship between information sources and the interest of pregnant women in doing PMTCT, it can be concluded that the better the information sources that pregnant women have, the higher the interest of pregnant women in doing PMTCT. Further research is expected to add more complex research variables, so that it can add *novelty* or novelty in increasing the interest of pregnant women in the implementation of PMTCT. The application of providing good and reliable sources of information can be increased to pregnant women in health care facilities, so that mothers' interest in doing PMTCT can increase. The best award to all respondents, health workers, and the Gamping I Yogyakarta Health Center who have participated in this study. Hopefully the results of this study can be a new reference in increasing the interest of pregnant women to do PMTCT and support efforts to prevent HIV transmission from mother to child.

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