

The Relationship Between Digital Education, Health Cadre Involvement And The Triple Elimination Programme In Preventing High-Risk Pregnancies At The Bogor Tengah Community Health Centre In 2025

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ABSTRACT

The main causes of high maternal mortality rates in Indonesia in 2024, such as haemorrhage, infection, and pre-eclampsia, can actually be detected and prevented during pregnancy through early identification of high-risk pregnancies. Efforts to manage high-risk pregnancies can be carried out through several measures, namely increasing public knowledge, enhancing the role of health cadres, and providing preventive health facilities. Objective: To determine the relationship between Digital Education, the Role of Health Cadres, and the Triple Elimination Programme with the Prevention of High-Risk Pregnancies at the Bogor Tengah Community Health Centre in 2025. Method: This study is an analytical study with a quantitative approach and a cross-sectional design. The study used a survey method, data collection with a questionnaire that had been tested for validity and reliability, and analysis using univariate and bivariate methods. Results: The majority of respondents were in the 26–30 age group (39.1%), had a high school/vocational school education (65.2%), were housewives (78.3%), and had 1–3 pregnancies (78.3%). In the Digital Education Exposure variable, most respondents were in the high category, namely 67 people (97.1%). while the health cadre involvement variable showed that almost all respondents rated the role of cadres as high, namely 68 people (98.6%), and the Triple Elimination Programme variable showed that the majority of respondents were in the high category, namely 67 people (97.1%). Conclusion: There is a relationship between Digital Education, Health Cadre Involvement and the Triple Elimination Programme with the Prevention of High-Risk Pregnancies at the Bogor Tengah Community Health Centre in 2025 (P-value: 0.029; 0.014; 0.029). Suggestion: To be able to

Keywords: High-risk pregnancy, digital education, health cadres, triple elimination.

I. INTRODUCTION

Efforts to reduce maternal mortality rates (MMR) remain a focus of global programmes as outlined in the Sustainable Development Goals (SDGs), which target a reduction in MMR to less than 70 per 100,000 live births by 2030 (WHO, 2022). In Indonesia itself, in line with the SDGs, the MMR reduction programme has been targeted in the Medium-Term Development Plan (RJPMN) with a target of reducing the MMR in 2024 to 183 per 100,000 live births, a target that is still far from the global target (Indonesian Ministry of Health, 2024).

From 2000 to 2023, the global maternal mortality ratio decreased by 40 per cent –

from 328 deaths to 197 deaths per 100,000 live births (WHO, 2024). while based on data from the Indonesian Ministry of Health's 2024 Performance Report, the MMR in Indonesia is 189 per 100,000 live births, down from previous years (Indonesian Ministry of Health, 2024). This achievement shows that the simultaneous efforts to reduce MMR in Indonesia and globally have been able to reduce MMR, although it is still quite far from the target.

Based on the Bogor City Health Profile, the number of maternal deaths in 2024 in Bogor City was 11 people or 92.02 per 100,000 live births. This shows a decrease in the number of maternal deaths in Bogor City from 2023, where there were 15 people or 59.87 per 100,000 live births. One of the efforts made by the Bogor City Health Office to reduce the MMR is through early detection of diseases and complications during pregnancy (Bogor City Health Office, 2024). At the Bogor Tengah Community Health Centre itself, there were no maternal deaths in 2024, but high-risk pregnancies were still found in 18% of all pregnancies.

The main causes of high MMR in Indonesia in 2024 were direct obstetric complications such as haemorrhage, pre-eclampsia/eclampsia, and infection. Additionally, other contributing factors include delayed diagnosis and referral to adequate health facilities, as well as inadequate healthcare during pregnancy and childbirth (WHO, 2024). Obstetric complications are health problems that arise during pregnancy, childbirth, or the postpartum period (the period after childbirth) that can endanger the mother and/or baby. These complications can range from minor problems to serious, life-threatening conditions. The key to preventing obstetric complications is early detection so that pregnant women at high risk can be properly treated and complications can be avoided. Early detection and appropriate treatment are essential to prevent possible adverse effects (Indonesian Ministry of Health, 2024).

Direct obstetric complications such as bleeding, preeclampsia/eclampsia, and infection as well as factors such as late diagnosis and referral to adequate health facilities, as well as lack of health care during pregnancy and childbirth have been shown to be the highest contributors to MMR.(WHO, 2024).Obstetric complications are health problems that arise during pregnancy, childbirth, or the postpartum period (the period after birth) that can endanger the mother and/or baby. They can be prevented through integrated antenatal care and early detection measures so that high-risk pregnancies can be properly managed and complications do not arise. Early detection and appropriate treatment are crucial to prevent potential adverse effects.(Ministry of Health of the Republic of Indonesia, 2024).

Early detection can certainly be performed by pregnant women if they have good knowledge about pregnancy. This knowledge can be enhanced through education or health education. With the massive development of technology, technology-based education for high-risk pregnant women is increasingly preferred due to various advantages, including wider reach and easier access. Digital education can be delivered through various digital platforms such as mobile apps, telehealth, and integrated

information systems. In addition to pregnant women themselves, mobilizing community participation, specifically health cadres, also plays a crucial role. The role of cadres in identifying and early detection of high-risk pregnant women is crucial, as cadres are part of the community itself and can help improve public health status through promotive and preventive measures.(Nafsih, et al., 2025).

Sexually transmitted infections (STIs) are among the causes of high-risk pregnancies that can lead to obstetric complications. Based on research conducted by Warliana and Solihah in 2023, the triple elimination program has a significant relationship in reducing the number of high-risk pregnancies, because pregnancies with STIs can increase morbidity and mortality for both mothers and babies. Through early detection and appropriate treatment, the triple elimination program, which is a national program consisting of HIV, Hepatitis B, and Syphilis testing, has been proven to help prevent complications in mothers and babies and reduce related morbidity and mortality.(Warliana & Solihah, 2023).

This demonstrates the importance of digital education, the role of health workers, and the triple elimination program in preventing high-risk pregnancies. Therefore, the authors believe this research is urgent, given that all efforts to improve maternal and child health align with national and global targets.

II. METHOD

This research is an analytical study with a quantitative approach. The research design used is cross-sectional. The study was conducted using a survey method on a sample within a population, using questionnaires and secondary data as data collection methods. The population in this study was all pregnant women in the working area of the Central Bogor Community Health Center (UPTD) in July-August 2025. The sample used in this study was the entire population or total sampling with a total of 69 samples. Analysis used univariate and bivariate.

RESULTS AND DISCUSSION

Frequency Distribution

Table 1 Frequency Distribution Results

Characteristics	Category	Frequency	Percentage (%)
Age	< 20 years	3	4.3%
	21 – 25 years old	15	21.7%
	26 – 30 years old	27	39.1%
	31 – 35 years old	18	26.1%
	> 35 years	6	8.7%
Education	Elementary School	2	2.9%
	JUNIOR HIGH SCHOOL	3	4.3%
	High	45	65.2%

	School/Vocational		
	School		
	D3	8	11.6%
	S1	10	14.5%
	S2	1	1.4%
Work	Housewife	54	78.3%
	Private sector employee	6	8.7%
	Self-employed	3	4.3%
	Nurse	1	1.4%
	Farmer	2	2.9%
	Honorary	1	1.4%
	Midwife	1	1.4%
	Other	1	1.4%
Number of Pregnancies	< 1	1	1.4%
	1 – 3	54	78.3%
	4 – 6	13	18.8%
	> 6	1	1.4%

Based on the analysis results in Table 1, the following description of the respondent characteristics was obtained: In terms of age, most of the respondents in this study were in the 26–30 age group (39.1%), followed by the 31–35 age group (26.1%). In terms of education, the educational characteristics of the respondents were dominated by high school/vocational school graduates at 65.2%, followed by college graduates (D3, S1, and S2) at 27.5%, while the rest were elementary and junior high school graduates. In terms of the type of respondents' jobs, most respondents worked as housewives (78.3%), while the rest were spread across the categories of private employees, self-employed, health workers, farmers, honorary workers, and other jobs. In terms of the number of pregnancies, the majority of respondents were in the category of 1–3 pregnancies (78.3%), while 18.8% had experienced 4–6 pregnancies, and only a small number were pregnant for the first time or had been pregnant more than six times.

Univariate Analysis

1. Digital Education

The Digital Education variable describes the extent to which pregnant women utilize digital media to obtain health information, measured through frequency of access, type of media, understanding, and level of trust in the information obtained.

Table 2 Description of Respondents' Perceptions regarding Digital Education

Digital Education	F	%
Low	2	2.9
Tall	67	97.1
Total	69	100.0

The results of the descriptive analysis of the digital education variable show that of the 69 respondents, the majority were in the high category, namely 67 people (97.1%), while only 2 respondents (2.9%) were included in the low category. This indicates that the majority of pregnant women in the work area of the Central Bogor Community Health Center UPTD have optimally utilized digital media, whether through WhatsApp, Instagram, the Ministry of Health application, or other health platforms, to obtain information related to pregnancy and maternal health. This high level of digital education utilization indicates a strong awareness of the importance of technology-based health information, which can support increased knowledge and preventive behavior of pregnant women in maintaining a healthy and safe pregnancy.

2. Involvement of Health Cadres

The Health Cadre Involvement variable reflects the level of active participation of cadres in providing education, support, and referrals, which is assessed from the intensity of interaction, form of assistance, closeness of relationship, and mother's perception of the cadre's role.

Table 3 Description of Health Cadre Involvement

Involvement of Health Cadres	F	%
Low	1	1.4
Tall	68	98.6
Total	69	100.0

The descriptive analysis of the health cadre involvement variable shows that almost all respondents were in the high category, namely 68 people (98.6%), while only 1 respondent (1.4%) was included in the low category. This indicates that health cadres have a very active role in assisting pregnant women in the work area of the Central Bogor Community Health Center (UPTD). The high level of cadre involvement is an important indicator that social support and education from cadres can increase the participation and awareness of pregnant women in maintaining pregnancy health, so that the role of cadres can be considered as one of the determining factors for the success of maternal health programs at the community level.

3. Triple Elimination Program

The Triple Elimination Program variable shows the implementation of HIV, syphilis, and hepatitis B screening in pregnant women, as seen from participation, knowledge, access to services, and follow-up compliance.

Table 4 Description of the Triple Elimination Program

Triple Elimination Program	F	%
Low	2	2.9
Tall	67	97.1
Total	69	100.0

The results of the descriptive analysis of the Triple Elimination Program variable show that most respondents are in the high category, namely 67 people (97.1%), while only 2 respondents (2.9%) are in the low category. This finding indicates that the majority of pregnant women in the working area of the Central Bogor Health Center UPTD have participated in and felt the benefits of the Triple Elimination program, which includes screening for HIV, syphilis, and hepatitis B. The high participation in this program shows the effectiveness of maternal health service efforts in providing access, knowledge, and necessary follow-up, so that it can increase the prevention of the risk of pregnancy complications while supporting maternal health targets at the community level.

4. High-Risk Pregnancy Prevention

The High-Risk Pregnancy Prevention variable emphasizes the efforts of pregnant women to prevent pregnancy complications, measured through compliance with antenatal care check-ups, attitudes towards risk, involvement in screening, and ownership of health insurance.

Table 5 Description of High-Risk Pregnancy Prevention

High-Risk Pregnancy Prevention	f	%
Low	1	1.4
Tall	68	98.6
Total	69	100.0

The results of the description of the high-risk pregnancy prevention variable show that of the total of 69 respondents, almost all of them are in the high category, namely 68 people (98.6%), while only 1 respondent (1.4%) is in the low category. This finding indicates that the majority of pregnant women in the work area of the Central Bogor Health Center UPTD have good awareness and actions in carrying out prevention efforts against pregnancy risks, such as compliance with antenatal care checks, participation in screening, and utilization of health insurance. This reflects the success of the maternal health service program in encouraging preventive behaviors that can reduce the potential for complications during pregnancy.

Bivariate Analysis

In this study, bivariate analysis was conducted to examine the relationship between the established independent and dependent variables. Digital education, health cadre involvement, and the Triple Elimination program were analyzed for their relationship to high-risk pregnancy prevention using the chi-square test, thus determining the statistical significance of the association between the two variables. With this approach, the study not only describes the data distribution descriptively but also assesses whether the differences between low and high categories in the independent variables are truly related to increased or decreased efforts to prevent high-risk pregnancies. The results of this analysis provide an important basis for concluding factors contributing to maternal health in the work area of the Bogor Tengah Community Health Center (UPTD) in 2025.

1. Testing the Relationship Between Digital Education and High-Risk Pregnancy Prevention

In this study, the relationship between digital education and high-risk pregnancy prevention was tested using the chi-square test as a bivariate analysis. This test was chosen because it can assess the relationship between two categorical variables: the level of digital education utilization (low and high) and high-risk pregnancy prevention efforts (low and high), based on the frequency distribution of respondents. This preliminary analysis aims to provide an initial overview of whether there is a significant relationship between the use of digital media as a source of health information and the behavior of pregnant women in taking steps to prevent the risk of pregnancy complications.

Table 6 Results of Bivariate Analysis of Digital Education and High-Risk Pregnancy Prevention

Digital Education	High-Risk Pregnancy Prevention		Total	p-value
	low	tall		
Low	1	1	2	0.029
Tall	0	67	67	
	1	68	69	

The results of the test of the relationship between digital education and high-risk pregnancy prevention showed a significant association, with a p-value of 0.029 (<0.05). Of the 69 respondents, 67 pregnant women with high levels of digital education also had high levels of pregnancy risk prevention, while only 2 respondents were in the low digital education category. These data indicate that the higher the level of digital education utilization, the better the pregnancy risk prevention behaviors carried out by

pregnant women in the work area of the Central Bogor Community Health Center (UPTD).

These findings are consistent with the theory that accessing health information through digital media can increase awareness and knowledge of pregnant women, thus encouraging them to be more active in seeking prenatal care, participating in screenings, and maintaining a healthy lifestyle. In other words, digital education is a crucial tool for shaping preventive behaviors in pregnant women, as easily accessible information can influence attitudes and decisions regarding pregnancy health.

Phenomenally, these results align with current societal conditions, where digital media use is increasingly widespread and utilized as a primary source of health information. The Ministry of Health app, WhatsApp, Instagram, and other digital platforms are effective ways for pregnant women to gain practical knowledge that can be immediately applied. Therefore, strengthening digital education in health facilities can be a relevant strategy to reduce the risk of pregnancy complications and improve the quality of maternal services at the community level.

2. Test of the relationship between the involvement of health cadres and the prevention of high-risk pregnancies

Table 7 Results of Bivariate Analysis of Health Cadre Involvement in High-Risk Pregnancy Prevention

Involvement of Health Cadres	High-Risk Pregnancy Prevention		Total	p-value
	low	tall		
Low	1	0	1	0.014
Tall	0	68	68	
	1	68	69	

The results of the test of the relationship between the involvement of health cadres and the prevention of high-risk pregnancies using the chi-square test showed significant results with a p-value of 0.014 (<0.05). Of the 69 respondents, almost all pregnant women with high cadre involvement (68 people) had a good level of high-risk prevention, while only 1 respondent with low cadre involvement was in the low prevention category. These results illustrate that the presence of cadres greatly determines the quality of preventive behavior of pregnant women in facing pregnancy risks.

These findings align with the concept that health cadres are the spearhead of community health services at the primary level, playing a role not only in providing education but also as active companions for pregnant women in accessing health services. High frequency of interaction, close relationships, and tangible support from cadres can improve pregnant women's adherence to prenatal checkups, participation in screenings, and adoption of healthy behaviors during pregnancy. Thus, cadres

contribute to strengthening the public health system through a direct approach that connects with key targets.

This phenomenon also reflects the success of the Central Bogor Community Health Center's (Puskesmas) UPTD strategy in empowering cadres as partners in maternal health services. The high level of cadre involvement reflected in this study demonstrates that cadre empowerment is an effective strategy in reducing the risk of pregnancy complications. Therefore, cadre capacity building through training, ongoing mentoring, and facility support from the local government needs to be continuously strengthened to optimize their contribution to supporting maternal health in the community.

3. Triple Elimination Test Links to High-Risk Pregnancy Prevention

Table 8 Results of the Triple Elimination Test Relationship with High-Risk Pregnancy Prevention

Triple Elimination Program	High-Risk Pregnancy Prevention		Total	P value
	low	tall		
Low	1	1	2	0.029
Tall	0	67	67	
	1	68	69	

The results of the relationship test between the Triple Elimination program and high-risk pregnancy prevention using the chi-square test showed a significant relationship with a p-value of 0.029 (<0.05). Of the 69 respondents, the majority of pregnant women who followed the Triple Elimination program well (67 people) also had a high level of high-risk prevention, while only 2 respondents were in the low category with a balanced distribution between low and high prevention efforts. These data show that the implementation of the Triple Elimination program has contributed significantly to improving the preventive behavior of pregnant women.

These findings support the theory that access to and participation in screening-based health programs, such as HIV, syphilis, and hepatitis B testing, can increase pregnant women's awareness and preparedness to prevent pregnancy risks. Through screening, pregnant women not only receive more comprehensive health information but are also encouraged to comply with medical follow-up and maintain healthy lifestyles. This strengthens the role of Triple Elimination as a comprehensive strategy to protect mothers and babies from potentially serious complications.

This phenomenon also aligns with the government's policy of expanding the scope of Triple Elimination services at the community health center (Puskesmas) level as part of efforts to reduce maternal and infant mortality. The high level of respondent participation in this program demonstrates that health facilities within the Bogor

Tengah Community Health Center (UPTD) are successfully providing adequate access and building public trust in healthcare services. Therefore, the program's sustainability and strengthening of outreach to pregnant women are essential to ensure its benefits are more evenly distributed and support the achievement of national maternal health targets.

III. DISCUSSION

1. The Relationship between Digital Education and High-Risk Pregnancy Prevention

The findings of this study, which demonstrate a significant relationship between digital education and the prevention of high-risk pregnancies, can be explained by the role of information technology as a primary means of disseminating health knowledge. Digital education allows pregnant women to access relevant and up-to-date information about pregnancy, routine check-ups, and warning signs to watch out for. According to the Health Information Seeking Behavior theory, easier access to health information will improve individual health literacy, ultimately encouraging the development of preventive behaviors. In this context, the use of digital media is an effective instrument in supporting healthier behavior changes in pregnant women.

Various studies have shown that the use of digital educational media significantly impacts pregnant women's behavior in detecting and preventing high-risk pregnancies. In Indonesia, the use of reminder messages via WhatsApp has been shown to increase adherence to antenatal care (ANC) visits and improve pregnant women's knowledge of pregnancy danger signs. The use of Instagram as a pregnancy education medium has proven to be very effective in increasing pregnant women's understanding of nutrition and the dangers of anemia. (Primary, 2023). Research by Aprina et al., (2024) shows that the use of Instagram as a pregnancy education medium is very effective in increasing pregnant women's understanding of nutrition and the dangers of anemia. In addition, social media-based educational media is known to increase knowledge, attitudes, and healthy lifestyle behavior in pregnant women, thereby supporting efforts to prevent high-risk pregnancies. (Aprina et al., 2024) These research findings reinforce the finding that exposure to digital media positively contributes to pregnancy preparedness and early medical care-seeking behavior (Rahayu et al., 2020).

On-the-ground research shows that the use of health apps, such as SehatPedia and the official Ministry of Health app, has significantly helped pregnant women understand the importance of regular antenatal care (ANC) checkups. These apps allow pregnant women to remember scheduled checkups, understand laboratory results, and obtain relevant basic medical advice. Furthermore, social media platforms like WhatsApp and Instagram are frequently used by health workers and pregnant women's communities to disseminate information about healthy eating habits, the importance of supplementation, and the dangers of anemia during pregnancy. This demonstrates that

digital education is not merely one-way but interactive, through online discussions that strengthen collective awareness.

Furthermore, this connection is also reflected in the increasing popularity of halodoc consultations, or online health consultations, which are widely chosen by pregnant women due to their ease of access and time efficiency. Digital consultations allow pregnant women to quickly receive answers to questions about pregnancy, including those concerning potentially dangerous symptoms. With readily accessible information, pregnant women can make quicker decisions about seeking medical help, thereby reducing the risk of complications. This supports research showing that digital education plays a role in strengthening risk-prevention behaviors during pregnancy.

On the other hand, the use of digital education also aligns with the increasing internet penetration in Indonesia, which according to the 2023 APJII report has reached over 210 million users. This figure reflects that the majority of the population, including pregnant women, are already familiar with the use of digital technology in their daily lives. Given this situation, integrating digital education into maternal health programs is an appropriate and relevant strategy. By strengthening educational content that is accurate, easy to understand, and tailored to local needs, digital education can continue to be a significant factor in encouraging preventive behaviors in pregnant women, thereby sustainably reducing the number of high-risk pregnancies.

2. The Relationship between Health Cadre Involvement and High-Risk Pregnancy Prevention

The research findings, which demonstrate a significant relationship between the involvement of health cadres and the prevention of high-risk pregnancies, can be understood through the theory of social support, which emphasizes the importance of social support in shaping individual health behaviors. Health cadres serve not only as sources of information but also as figures who provide motivation and a sense of security for pregnant women throughout their pregnancies. Through direct interaction, pregnant women more easily understand health messages, feel cared for, and are motivated to engage in preventive behaviors such as regular prenatal checkups and participating in offered health programs.

Field observations show that cadres often serve as the primary intermediary between pregnant women and medical personnel. For example, during integrated health posts (Posyandu) or home visits, cadres help document the mother's health status, remind her of scheduled checkups, and even provide referrals if risky symptoms are detected. This approach is personalized and in keeping with the local sociocultural context, making it more readily accepted by pregnant women than information provided formally by health workers at medical facilities. This cadre's role contributes to greater adherence to checkups and healthy lifestyles.

Furthermore, the involvement of health cadres also reflects the success of the community-based healthcare approach, where community empowerment is key to

improving health. In many regions, health cadres play an active role in providing education on nutrition for pregnant women, the dangers of anemia, the importance of taking iron supplements, and early detection of complications. This phenomenon demonstrates that cadre support extends beyond providing information; it also fosters emotional bonds that empower pregnant women to be more confident in maintaining their health. Thus, cadre involvement significantly contributes to preventing pregnancy risks.

Dinengsih, S., & Kania, ND (2024) In her research, she stated that informational and motivational support from cadres was significantly associated with maternal participation in antenatal classes ($p < 0.05$). Research by Nuraeni (2024) found a linear relationship between the role of cadres and knowledge of high-risk pregnancies—mothers who received active support from cadres tended to better understand the risks of high-risk pregnancies ($p = 0.03$).

This situation is also relevant to the success of the maternal and child health (MCH) program in Indonesia, which relies heavily on the role of cadres at the village and sub-district levels. Ministry of Health data shows that cadres are the spearhead of the implementation of integrated health posts (Posyandu), which target pregnant women, toddlers, and families. Without cadre involvement, maternal health service coverage would be significantly lower, especially in areas with limited access to medical facilities. Therefore, this study strengthens empirical evidence that health cadres are a strategic factor associated with preventing high-risk pregnancies through consistent education, mentoring, and referrals.

3. The Relationship between Triple Elimination and High-Risk Pregnancy Prevention

The research findings showing a significant relationship between the Triple Elimination program and the prevention of high-risk pregnancies can be explained through the perspective of health behavior theory, which emphasizes the importance of screening-based interventions in improving preventive behaviors. The Triple Elimination program, which includes early detection of HIV, syphilis, and hepatitis B, provides pregnant women with the opportunity to learn about their health conditions early, thereby encouraging adherence to medical follow-up and healthy behaviors during pregnancy. Therefore, participation in this program contributes directly to efforts to reduce the risk of pregnancy complications.

This is in accordance with the results of previous research which stated that pregnant women who participated in triple elimination screening tended to have higher levels of preventive behavior, which supports the success of obstetric complication prevention programs. (Sinaga et al., 2022)

Field observations show that the Triple Elimination program implemented in various regions, including at the Bogor Tengah Community Health Center (Puskesmas), has successfully raised awareness among pregnant women about the importance of infectious disease screening. For example, pregnant women who are diagnosed with

certain risks early can receive immediate referrals to advanced healthcare services, reducing the likelihood of complications. This aligns with the principle of preventive healthcare, where early detection is key to preventing greater risks to both mother and baby.

Furthermore, the success of the Triple Elimination program also reflects the effectiveness of government policies in reducing maternal and infant mortality through structured interventions. Community health centers, as the frontline of public health, play a crucial role in providing easy, affordable, and accessible screening access for all pregnant women. With standardized services, pregnant women feel more confident in utilizing health facilities, which ultimately strengthens preventive behaviors in maintaining their pregnancies.

This situation is relevant to the growing public awareness of the importance of healthy and safe pregnancies. With more pregnant women participating in the Triple Elimination program, high-risk preventative behaviors can be significantly improved. Therefore, this program serves not only as an early detection tool but also as a tool for strengthening the maternal health system, capable of creating sustainable preventive behavior changes at the community level.

IV. CONCLUSION

Based on the research that has been conducted, it can be concluded:

1. There is a significant relationship between digital education and the prevention of high-risk pregnancies in pregnant women in the working area of the Central Bogor Health Center UPTD in 2025, where the use of digital media has been proven to increase the knowledge, awareness, and preventive behavior of pregnant women.
2. There is a significant relationship between the involvement of health cadres and the prevention of high-risk pregnancies, where the active role of cadres in providing education, assistance, and health referrals can encourage pregnant women to be more compliant in pregnancy check-ups and healthy lifestyle behaviors.
3. There is a significant relationship between the Triple Elimination program and the prevention of high-risk pregnancies, which indicates that the participation of pregnant women in HIV, syphilis, and hepatitis B screening contributes to increased preventive efforts and supports the success of maternal health programs.

REFERENCE

Afifah, DN, Arifah, I., & KM, S. (2025). The Relationship Between Knowledge and Exposure to Information of Pregnant Women About High-Risk Pregnancy and Compliance with ANC Visits at Gambirsari Community Health Center (Doctoral dissertation, Muhammadiyah University of Surakarta).<https://eprints.ums.ac.id/id/eprint/132119>

- Anjani¹, AD, Aulia², DLN, Oktaviona³, N., Duriyanti⁴, Fuja, I., Andara⁵, Alini⁶, & Nailah Al-Hikmah⁷. (2025). THE EFFECT OF EXPOSURE TO HEALTH CONTENT ON TIKTOK ON KNOWLEDGE OF HEALTHY PREGNANCY IN GEN Z. TAMBUSAI HEALTH JOURNAL.<https://journal.universitaspahlawan.ac.id/index.php/jkt/article/view/42065>
- Ariantika, A. (2024). The Relationship Between Pregnant Women's Knowledge and the Use of KIA Books at the Pahandut Community Health Center (Doctoral dissertation, POLTEKKES, KEMENKES PALANGKA RAYA).<http://repo.polkesraya.ac.id/3741/>
- Astuti, DA, Kurniati, N., Rasyid, E., & Ningrum, RWK (2025). PKM CAPACITY ENHANCEMENT FOR HIV/AIDS CADRES IN NGARAN HALL, BALECATUR VILLAGE THROUGH DIGITAL MANAGEMENT. Journal of Midwifery Community Service, 7(2), 27-33.<https://jurnal.unimus.ac.id/index.php/JPMK/article/view/18661>
- Bond, M., Bergdahl, N., Mendizabal-Espinoza, R., Kneale, D., Bolan, F., Hull, P., & Ramadani, F. (2021). Global emergency remote education in secondary schools during the COVID-19 pandemic: A systematic review.<https://discovery.ucl.ac.uk/id/eprint/10136765/>
- Candrasari, S. (2019). Interpersonal communication through the use of social media between doctors and patients at the Medika Lestari Clinic, Jakarta. Professional: Journal of Communication and Public Administration, 6(1).<https://jurnal.unived.ac.id/index.php/prof/article/view/836>
- Bogor City Health Office. (2024). Bogor City Health Profile 2024.<https://dinkes.kotabogor.go.id/publikasi-data>
- Dinengsih, S., & Kania, ND (2024). The Relationship between the Role of Cadres and the Role of Husbands with the Behavior of Utilizing Pregnant Women's Classes: The Role of Cadres and the Role of Husbands with the Behavior of Utilizing Pregnant Women's Classes. Professional Health Journal, 5(2), 557-569.<https://www.ojsstikesbanyuwangi.com/index.php/PHJ/article/view/669>
- Ekacahyaningtyas, M., & Mustikarani, IK (2021). Education about danger signs of pregnancy to overcome maternal anxiety during pregnancy. Jurnal Kesehatan Madani Medika, 12(1).<http://www.jurnalmadanimedika.abdimasmadani.ac.id/JMM/article/view/144>

- Hasyim, M. (2024). Challenges and Opportunities of Health Education in the Digital Era: Building Online Health Awareness. *Oshada*, 1(2), 16-24.<https://pdfs.semanticscholar.org/e2ea/902f6b39d9a343dc2f4451d3cd016f668cdc.pdf>
- Hodges, T.S., Kerch, C., & Fowler, M. (2020). Teacher education in the time of COVID-19: creating digital networks as university-school-family partnerships. *Middle Grades Review*, 6(2), n2.<https://eric.ed.gov/?id=EJ1257612>
- Hutabarat, BP (2024). Empowering Pregnant Women in Early Detection of Pregnancy Complications Through the Use of Sobat Ibu Hamil Application in Bogor Regency (Doctoral dissertation, Hasanuddin University).<https://repository.unhas.ac.id/id/eprint/34508/>
- Ihsan, SN, & Aminah, S. (2025). Utilization of Instagram Live Broadcasts as a Media for Health Education for Pregnant Women through the Account @bumil_pintar. *AJAD: Journal of Community Service*, 5(2), 305-313.<http://journal.msti-indonesia.com/index.php/ajad/article/view/562>
- Ministry of Health of the Republic of Indonesia. (2022). Training MODULE for Health Cadre Trainers.https://repositori-ditjen-nakes.kemkes.go.id/441/1/modul_21010607295920a21e9be701b86777d9e602774b2188_.pdf
- Ministry of Health of the Republic of Indonesia. (2024). Indonesian Health Profile 2023.https://kemkes.go.id/app_asset/file_content_download/172231123666a86244b83fd8.51637104.pdf
- Landers, C. (2024). Enabling Responsible Digital Health Innovation: From Ethical Principles To Innovation And Regulation Practice (Doctoral dissertation, ETH Zurich).<https://www.research-collection.ethz.ch/entities/publication/6242fd20-e14c-4a8b-be25-27108a50a07a>
- Mayangsari, DN (2024). The Effectiveness of the Role of Cadres in Reducing the Incidence of Stunting in Toddlers. *J-CEKI: Jurnal Cendekia Ilmiah*, 3(6), 6015-6030.<https://ulilalbabainstitute.co.id/index.php/J-CEKI/article/view/5138>
- Nafsih, TA, Siregar, R., Fauziah, S., & Suhita, TI (2025). THE ROLE OF CADRES IN EARLY DETECTION OF HIGH-RISK PREGNANCY IN RW. 01 MANGUNJAYA VILLAGE, BEKASI REGENCY. *PROFICIO*, 6(2), 545-551.<https://ejournal.utp.ac.id/index.php/IPF/article/view/4983>

- Nur'aeni, NA (2024). Stunting Prevention Communication Strategies in Efforts to Change Behavior in Pregnant Women at the Makassar City Public Health Center (Doctoral dissertation, Hasanuddin University). <https://repository.unhas.ac.id/id/eprint/34462/>
- Odone, A., Buttigieg, S., Ricciardi, W., Azzopardi-Muscat, N., & Staines, A. (2019). Public health digitalization in Europe: EUPHA vision, action and role in digital public health. *European journal of public health*, 29(Supplement_3), 28-35. https://academic.oup.com/eurpub/article-abstract/29/Supplement_3/28/5628048
- Pratama, RN (2023). The Effect of Using Audio Visual Educational Media on Increasing Pregnant Women's Knowledge of Nutrition During Pregnancy. *Masker Medika*, 11(2), 251-257. <http://jmm.ikestmp.ac.id/index.php/maskermedika/article/view/547>
- Pratiwi, MKI, Dewi, KAP, & Teja, NMAYR (2024). The Relationship Between Mothers' Knowledge and Pregnant Women's Attitudes Regarding High-Risk Pregnancy Prevention. *Menara Medika*, 7(1), 153-161. <https://jurnal.umsb.ac.id/index.php/menaramedika/article/view/5517>
- Rachmawati, I., Hermayanti, Y., & Ermiati, E. (2024). Effectiveness of Self-Care Teaching Media for Pregnant Women and Pregnant Women with Hypertension. *Jurnal Kesehatan*, 15(3), 419-433. <http://ejurnal.poltekkes-tjk.ac.id/index.php/JK/article/view/4665>
- Sinaga, L., Azizah, N., Sinuhaji, LN, Sinaga, R., Yun, DC, & Adelia, M. (2025). The Relationship of Pregnant Women's Behavior to the Utilization of Triple Elimination Examination at the Kuala Bangka Community Health Center, North Labuhan Batu Regency in 2022. *NAJ: Nursing Applied Journal*, 3(2), 183-191. <https://jurnal.stikeskesosi.ac.id/index.php/NAJ/article/view/629>