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Empowerment of Cadres And Education of Pregnant Women About Triple Elimination in Efforts to Prevent The Transmission Of Infectious Diseases in Penyengat Olak Village, Jambi Luar Kota, Muara Jambi

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ABSTRACT

HIV, syphilis, and hepatitis B infections are infectious diseases that remain a global health problem, including in Indonesia. Mother-to-child transmission rates are the highest among these three diseases. HIV transmission from mother to child is 20-45%, syphilis transmission from mother to child is 69-80%, and hepatitis B transmission from pregnant women to children is 90-95%. Diseases that should be screened for in mothers during pregnancy include HIV, syphilis, and hepatitis B. These infections in children occur as a result of transmission from the mother during pregnancy, childbirth, and breastfeeding. Programs to prevent mother-to-child transmission of HIV, integrated with efforts to eliminate HIV, congenital syphilis, and hepatitis B, are highly effective interventions to prevent mother-to-child transmission of HIV, syphilis, and hepatitis B. HIV, Syphilis and Hepatitis B screening for pregnant women is carried out in an integrated antenatal care package and supported by promotive and preventive efforts in adolescent reproductive health and family planning services and supports the National Program for Eliminating the Transmission of these three diseases or often called "Triple Elimination". The government's efforts to break the chain of transmission of HIV, syphilis, and hepatitis B infections from mother to child are carried out through the Triple Elimination program, which aims to reduce the risk of transmission of these three diseases from pregnant women to their babies during pregnancy, childbirth, or through breastfeeding. The goal is to prevent these diseases in newborns and provide protection to mothers during pregnancy. This includes testing and counseling for early detection of HIV, syphilis, and hepatitis B, antiretroviral therapy (ARV), syphilis treatment, hepatitis B vaccination and immunization, infant monitoring and care, safe breastfeeding, education, and support. Factors influencing the success of the Triple Elimination program include knowledge, attitudes, and support from health workers.

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INTRODUCTION

Penyengat Olak Village is located in the Jambi Luar Kota sub-district, Muaro Jambi Regency. Jambi Luar Kota sub-district consists of eight villages: Kedemangan, Mendalo Laut, Penyengat Olak, Rengas Bandung, Sarang Burung, Sembubuk, Senaung, and Simpang Limo. Penyengat Olak Village has the highest number of pregnant women, with 30 pregnant women and 5 cadres in the first trimester (K1) between January and April. (1)

According to WHO (World Health Organization) data, the prevalence of HIV, syphilis, and hepatitis B in the Asia Pacific region is quite high: 71,000 pregnant women are infected with HIV, 15,000 children are infected with HIV (21% mother-to-child transmission), 167,000 pregnant women are infected with syphilis, and 15% have chronic hepatitis B. (2)

Based on Indonesian Health Profile data, 2,485,430 pregnant women were tested for HIV in Indonesia, and 2,946,013, or 60.3%, were tested for Hepatitis B. This figure represents an increase compared to the previous year's 51.4% test. Of these, 4,466 (0.18%) pregnant women tested positive for HIV, and 47,550 (1.6%) tested reactive for Hepatitis B. (3)

According to the 2022 Jambi Provincial Health Profile, 22,730 pregnant women were tested for HIV in Jambi Province. The tests found 4,466 (0.53%) pregnant women to be HIV-positive. The districts with the highest percentages were Jambi City (1.59%), East Tanjung Jabung (0.51%), and Muaro Jambi (0.17%). The number of pregnant women tested for hepatitis B using the HBsAg RDT in 2022 was 42,806, or 63.20%. The results showed that 480, or 1.12%, tested reactive. (5)

During the site survey, volunteers interviewed several pregnant women undergoing antenatal care visits. Several of the pregnant women expressed fear of the Triple Elimination test and chose to refuse. They were afraid of the test results, especially if they were positive. In fact, in order to create a healthy and competitive next generation of the nation, efforts to stop the transmission of these three diseases must be carried out. Efforts to stop transmission from mother to child will be very effective if carried out together, integrated, and comprehensively in maternal and child health services (MCH) in the form of early detection during integrated antenatal care, early treatment, and immunization at the first level of service and referrals. This is in line with the Minister of Health Regulation Number 52 of 2017 concerning the Elimination of transmission of HIV, Syphilis, and Hepatitis B from mother to child. (4)

The impact of pregnant women who have infectious diseases hurts the baby. More than 90% of infectious diseases directly in babies such as HIV, Syphilis and Hepatitis B are transmitted from infected mothers, in pregnant women infected with HIV half of the children born will be infected with HIV, without proper treatment the impact is death, in pregnant women infected with Syphilis 67% of babies will be infected resulting in abortion and death, likewise in 90% of babies infected with Hepatitis B have the potential to become chronic with the risk of various complications such as severe chronic Hepatitis, Liver Cancer and become a source of Hepatitis B transmission throughout their lives. (4)

The government's efforts to break the chain of transmission of HIV, syphilis, and hepatitis B infections from mother to child are through the Triple Elimination program, which aims to reduce the risk of transmission of these three diseases from pregnant women to their babies during pregnancy, childbirth, or through breastfeeding. The goal is to prevent these diseases in newborns and provide protection to mothers during pregnancy, including testing and counseling for early detection of HIV, syphilis, and hepatitis B, antiretroviral therapy (ARV), syphilis treatment, hepatitis B vaccination and immunization, infant monitoring and care, safe breastfeeding, education, and support. (4)

Factors that influence the success of the Triple Elimination program include knowledge, attitudes,

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and support from health workers. (6) According to Notoatmodjo (2018), knowledge is the result of human sensing or the result of someone knowing an object through their senses (eyes, nose, ears, etc.), and knowledge measurement is carried out through interviews that ask about the content of the material being measured from the research subjects. (7)

This shows that empowering cadres through training can improve their knowledge. This is in line with the training conducted by Kosasih, Purba, & Sriati (2018), which showed an increase in the knowledge of health cadres before and after training regarding nutritional disorders and early detection of nutritional disorders. Training-based knowledge improvement in cadres can be done using various methods, such as lectures, discussions, and practicals provided by health workers to the cadres. (9)

METHOD

This community service activity was implemented through the distribution of a pocketbook on Triple Elimination. Before the pocket book was distributed, a pre-test was conducted for the cadres, followed by a post-test. Pregnant women were then educated about triple elimination through a presentation of the material.

The implementation of this cadre empowerment method was as follows:

- The trainer gathered the cadres at the Penyengat Olak village hall to provide advance information about the upcoming activity, to teach the cadres how to provide education using the pocket book on Triple Elimination to pregnant women. The trainer then prepared the time, location, media, facilities, techniques, tools, and criteria for pregnant women to participate.
- After the cadres were educated through the prepared pocket book for study and practice, a pre-test was conducted to gauge understanding.
- The Community Service Team then visited the community service team to evaluate the implementation of the previously provided materials.
- Following the evaluation visit, the community service team reviewed the results of the previous pre-test questionnaire, inquired about any misunderstandings, and revised the results to ensure optimal implementation of the triple elimination education in their service locations.
- After that, the community service team will conduct a re-evaluation through the post-test results to determine whether the cadres understand and can apply triple elimination education correctly.

RESULT

Respondent Characteristics of Cadres

TABLE 1. Distribution of Participant Characteristics (Cadres) Based on Age

Age	n	%
20-30	0	0
31-40	5	100
	5	100

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The Characteristics of Cadres in terms of Age, there are no cadres aged 20-30 years, aged 31-40 years consists of 5 people, and the total is 5 cadres.

TABLE 2. Distribution of Participant Characteristics (Cadres) Based on Education

Education	n	%
SMP	0	0
SMA	5	100
	5	100

The Characteristics of cadres in terms of cadre education, none have junior high and high school education, consisting of 5 people, and the total is 5 cadres.

TABLE 3. Distribution of Participant Characteristics (Cadres) Based on Work

Work	n	%
IRT	5	100
Working	0	0
	5	100%

Characteristics of cadres in terms of cadre work, IRT consists of 5 people, and none of them has a private job and the total is 5 cadres.

Respondent Characteristics of Pregnant Women

TABLE 4. Distribution of Characteristics of Pregnant Women Based on Age

Age	n	%
20-30	12	40
31-40	18	60
	30	100

Characteristics of pregnant women in terms of age, pregnant women aged 20-30 years consist of 12 people, aged 31-40 years consist of 18 people, and the total is 30 people.

TABLE 5. Distribution of Characteristics of Pregnant Women Based on Education

Education	n	%
SMP	14	47
SMA	16	53
	30	100

Characteristics of pregnant women in terms of education, junior high school consists of 14 people, high school consists of 16 people, and the total number is 30 people.

TABLE 6. Distribution of Characteristics of Pregnant Women Based on Work

Work	n	%
IRT	25	83
working	5	17

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	30	100%

The characteristics of the cadres in terms of work are housewives consisting of 25 people and working 5 people; the total number is 30 people.

Pre-Test and Post-Test Cadre

TABLE 7. Pre-test and Post-test Cadre

No	PRE TEST				POST TEST			
	True	%	False	%	True	%	False	%
1	3	60	2	40	5	100	0	0
2	0	0	5	100	4	90	1	10
3	3	60	2	40	5	100	0	0
4	2	40	3	60	5	100	0	0
5	2	40	3	60	4	90	1	10
6	2	40	3	60	4	90	1	10
7	2	40	3	60	4	90	1	10
8	1	10	4	90	5	100	0	0
9	3	60	2	40	5	100	0	0
10	2	40	3	60	4	90	1	10

Based on the results of the pre-test scores on cadres before being given the pocketbook, it can be seen that the answer to question number 2 was 0, meaning that the lowest score was 0, and the highest was 5 out of 10 questions correct. Cadres, on average, knew with a score of (≤56-74%).

Based on the post-test scores, there was an increase in the number of correct answers to each question. After providing insight through lectures, Q&A sessions, and skills practice using a pocketbook on Triple Emination, five questions were answered correctly.

Then, to assess knowledge before and after the data normality test was carried out, where the data distribution was not normally distributed so a test was carried out using the Wilcoxon, with a value of 0.000, which means there was an effect of training in increasing cadre knowledge.

Pre-Test and Post-Test Pregnant Woman

TABLE 8. Pre-test and Post-test Pregnant Woman

No	PRE TEST				POST TEST			
	True	%	False	%	True	%	False	%
1	15	50	15	50	30	100	0	0
2	13	43	17	57	25	83	5	17
3	10	33	20	67	22	73	8	27
4	12	40	18	60	24	80	6	20
5	8	27	22	73	25	83	5	17
6	10	33	20	67	22	73	8	27
7	8	27	22	73	25	83	5	17
8	15	50	15	50	30	100	0	0

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9	12	40	8	27	24	80	6	20
10	13	43	17	57	30	100	0	0

Based on the results of the pre-test scores on pregnant women before being given the pocket book, it can be seen that the answer to question number 5 was 8 pregnant women, which means that there is still the lowest score out of 10 questions.

Based on the post-test scores, there was an increase in the number of correct answers to each question. After being educated about triple elimination using lectures, question-and-answer sessions, and skills practice using a pocketbook on Triple Elimination, three questions were answered correctly.

Then, to assess knowledge before and after the data normality test was carried out, where the data distribution was not normal, a test was carried out using the Wilcoxon, with a value of 0.000, which means there was an influence.

DISCUSSION

The results of the community service implementation showed that the distribution of participant characteristics data was consistent with the 5 cadres, with the highest age range being 31-40 years (5), the highest education level being high school (5) (100%), and the highest occupation being housewives (5) (100%).

Based on the pre-test results, the cadres received the lowest score of 6 out of 10 questions correct before being given the triple elimination education material, and the highest score was 8 out of 10 questions correct. On average, the cadres did not fully understand triple elimination and special interventions for early detection of infectious diseases during pregnancy.

Based on the post-test results, the lowest score was 8 and the highest was 10. After participating in the education, both lecture and question-and-answer methods, four cadre participants answered all questions correctly.

Knowledge was obtained from a pretest conducted to assess the knowledge of female cadres about Triple Elimination in Penyengat Olak Village before the intervention. The assessment was categorized as good knowledge (≥75%), sufficient knowledge (≤56-74%), and less knowledge (≤55%).

Based on the pretest results, the lowest score for cadres before being educated about Triple Elimination was 6, and the highest was 8 out of 10 questions correct. On average, cadres had a poor understanding of Triple Elimination for pregnant women.

Knowledge was obtained from a pretest conducted to assess the knowledge of female cadres about Triple Elimination in Penyengat Olak Village before the intervention. The assessment was categorized as good knowledge (≥75%), sufficient knowledge (≤56-74%), and less knowledge (≤55%).

Based on the posttest results, the lowest score was 8 and the highest was 10. After the intervention, the lowest score was 8.

Health cadres are selected residents and equipped with health skills through training by local health service facilities/Community Health Centers. Becoming a health cadre is one form of community participation in Primary Health Care (PHC). These health cadres will then become the driving force or managers of primary health care efforts. The role of information in community health management is crucial; therefore, health cadres have the right and obligation to provide correct and accurate health

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information in their area (Safrudin and Sariana, 2021).

Cadres who play a key role in driving integrated health service posts (Posyandu) are expected to possess sound knowledge and high motivation. Providing material before the knowledge assessment significantly enhances cadres' knowledge of the Triple Elimination and its prevention, as they are already exposed to the information. Furthermore, the characteristics of cadres, most of whom have a high school education, indicate that the higher a person's education and the more information they receive, the broader their knowledge (Notoatmodjo, 2012).

Based on the results of the pre-test on cadres before being given the Triple Elimination education material through the pocketbook, the lowest score was 6 correct, and the highest was 8 correct out of 10 questions. On average, cadres had little understanding of Triple Elimination for pregnant women.

Based on the post-test, the lowest score was 8 and the highest was 10. After the intervention, namely Triple Elimination education using the pocketbook in Penyengat Olak village, this study showed that empowering cadres through training can improve their knowledge. This is in line with the training conducted by Kosasih, Purba, & Sriati (2018), which showed an increase in knowledge of nutritional disorders and early detection of nutritional disorders among health cadres before and after training. Training-based knowledge improvement among cadres can be achieved through various methods, such as lectures, discussions, and practical exercises provided by health workers to the cadres (Kosasih, C.E., Purba, C.I., & Sriati, 2018).

Based on the results of the pre-test scores on pregnant women before being given the pocket book, it can be seen that the answer to question number 5 was 8 pregnant women, which means that there is still the lowest score out of 10 questions. Based on the post-test scores, there was an increase in the number of correct answers to each question. After being educated about triple elimination using lectures, question-and-answer sessions, and skills practice using a pocketbook on Triple Elimination, three questions were answered correctly. Research by Vebriyani et al. (2022) supports these findings, stating that the majority of pregnant women (85.7%) had good knowledge. This knowledge can be acquired through non-formal education, training, experience, and self-development.

Research by Nurlaila & Sari (2021) also shows that pregnant women's knowledge is closely related to their participation in triple elimination screening. Mothers with good knowledge are more likely to comply with screening compared to those with less understanding. However, research by Sude et al. (2024) reveals that knowledge barriers are often influenced by limited access to information and a lack of personal education, especially in remote areas.

CONCLUSION

- Increased knowledge of triple elimination among cadres.
- Changes in attitudes among cadres, including their skills in educating about triple elimination using a pocket book.
- Increased skills in providing triple elimination education using a pocket book.

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APPENDIX

FIGURE 1. The Community service activities

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