

# Pap Smear Examination as a Strategy for Prevention and Early Detection of Cervical Cancer at the HKBP Jatisampurna Church, Bekasi

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## ABSTRACT

Cervical cancer remains one of the leading causes of morbidity and mortality among women, particularly in developing countries, largely due to late diagnosis and low participation in early screening programs. Limited knowledge and awareness regarding cervical cancer and Pap smear examinations contribute significantly to delayed detection. This community service activity aimed to increase the knowledge and awareness of the congregation of HKBP Jatisampurna Church, Bekasi, regarding the importance of early detection of cervical cancer through Pap smear examinations. The activity was conducted using interactive educational counseling followed by free Pap smear examination services. Educational sessions covered cervical cancer risk factors, prevention strategies, and the procedures and benefits of Pap smear screening. A total of 50 female congregation members participated in the activity and voluntarily underwent Pap smear examinations. The results demonstrated an improvement in participants' knowledge and understanding of cervical cancer and the importance of early detection through Pap smear screening. In addition, there was an increased willingness and participation of congregation members in undergoing Pap smear examinations, indicating positive behavioral changes toward preventive health practices. In conclusion, educational counseling combined with direct Pap smear services effectively increased awareness and participation in cervical cancer screening among the HKBP Jatisampurna Church congregation. This community service activity represents a strategic approach to cervical cancer prevention and early detection and highlights the importance of community-based interventions in promoting women's reproductive health.

**Keywords:** Cervical cancer, Pap smear, early detection, community service, health education

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## INTRODUCTION

Cervical cancer is a female reproductive health issue which remains a global concern. It the fourth most common cancer in women worldwide, with relatively high incidence

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and mortality rates, particularly in developing countries (World Health Organization [WHO], 2023). The high mortality rate of cervical cancer is largely due to delayed diagnosis, with most cases detected at an advanced stage, lowering the chances of successful treatment. Cervical cancer is closely linked to Human Papillomavirus (HPV) infection, particularly the persistent high-risk types. HPV infection can cause gradual changes in cervical epithelial cells, ranging from precancerous lesions to invasive cancers, if not detected and treated early (American Cancer Society, 2022). The relatively long developmental process of cervical cancer provides a significant opportunity for its prevention and early detection through effective screening programs.

One screening method that has been proven effective and widely used is the Pap smear test. This test aims to detect abnormal cell changes in the cervix prior to cancer development. Various studies have shown that routine Pap smear screening can significantly reduce the incidence and mortality of cervical cancer (WHO 2023). Therefore, the Pap smear is recommended as the primary method for the early detection of cervical cancer, especially in women of reproductive age and at-risk groups. Cervical cancer remains one of the most prevalent cancers in women in Indonesia. The Indonesian Ministry of Health reports that low cervical cancer screening coverage is a major challenge in preventing this disease (Ministry of Health of the Republic of Indonesia, 2022). Although an early detection program has been launched nationally, women's participation in Pap smear screening remains relatively low, particularly at the community level.

Low participation in Pap smear screening is influenced by various internal and external factors. Internal factors include a lack of knowledge and understanding of cervical cancer, benefits of early detection, and the Pap smear procedure. Furthermore, psychological factors such as fear, embarrassment, and anxiety about test results are also major barriers (Notoatmodjo, 2018). External factors include limited access to health services, the cost of screening, and social and cultural influences that still consider reproductive health screenings sensitive. Health education and promotion play crucial roles in increasing public knowledge and awareness of cervical cancer and early detection. According to Notoatmodjo (2018), increasing knowledge through health education can influence a person's attitudes and behaviors regarding their health. Appropriate and ongoing education is expected to encourage behavioral changes, including increased participation of women in routine Pap smear screenings.

A community-based approach is an effective strategy to implement health education and services. Community service activities conducted directly within the community, including religious institutions, can increase trust, acceptance, and participation (Setyarini et al., 2020). As centers of social and spiritual activities, churches have significant potential as a medium for health education because of their close relationship with the community and their role in shaping the values and behaviors of their congregations.

The HKBP Jatisampurna Church in Bekasi, a center for religious and social activities, is a strategic site for community reproductive health services. Through health education activities combined with direct Pap smear services, it is hoped that barriers to accessing screening services can be minimized. Furthermore, these activities also aim to increase awareness and concern among female congregation members regarding the

importance of early cervical cancer detection as part of efforts to maintain reproductive health.

Based on this description, the implementation of Pap smear screenings accompanied by health education at the HKBP Jatisampurna Church in Bekasi is a strategic and relevant step to support the cervical cancer prevention program. This activity is expected to not only increase the congregation's knowledge and awareness but also encourage positive behavioral changes in routine early detection, ultimately reducing the risk of cervical cancer and improving women's health within the church community.

## METODE

This community service activity was implemented using a promotive and preventive approach through health education and cervical cancer screening services using Pap smears. The methods used were designed to increase knowledge, awareness, and active community participation in early cervical cancer detection.

### 1. Activity Design

This activity utilized community-based health education and a service design. The approach included interactive health education and direct Pap smear services for participants. This design aims to integrate increased knowledge with concrete actions in the form of health checks.

### 2. Location and Time

The activity was held at the HKBP Jatisampurna Church in Bekasi, a center for community social and religious activities. The activity took place on a single day and was mutually agreed upon by the church administrators and participants.

### 3. Target Group and Participants

The target group for this activity was female members of the HKBP Jatisampurna Church congregation who were of reproductive age and met the criteria for a Pap smear. Fifty participants voluntarily participated after receiving an explanation of the program's objectives and procedures.

### 4. Implementation Stages

#### a. Preparation Stage

The preparation stage included coordination with the HKBP Jatisampurna Church administration, obtaining permits for the activity, and preparing necessary facilities and infrastructure. The implementation team also prepared health education materials for cervical cancer and early detection, as well as tools and materials for the Pap smear test.

#### b. Implementation Stage

The implementation stage began with a health education session delivered interactively using lectures and discussion methods. The material provided covered the definition of cervical cancer, risk factors, signs and symptoms, importance of early detection, and Pap smear procedure. Following education, participants who agreed to participate underwent a Pap smear test performed by a healthcare professional in accordance with medical service standards and sterility principles.

#### c. Evaluation Stage

Activity evaluation was conducted descriptively by assessing changes in the participants' knowledge before and after the counseling session through question-and-

answer sessions and interactive discussions. Furthermore, the level of participant participation in the Pap smear examinations was also used as an indicator of the activity's success.

#### 5. Data Analysis

The data obtained included the number of participants who attended the counseling session and Pap smear examination as well as an overview of the increase in participants' knowledge. The data were analyzed descriptively and presented narratively to illustrate the achievements of the community service activity.

#### 6. Activity Ethics

The implementation of the activity took ethical considerations into account by providing participants with clear information about the activity's objectives, benefits, and procedures. All participants provided voluntary consent, and the implementation team maintained the confidentiality of their identities and test results.

## RESULTS AND DISCUSSION

Notable results from the outreach and Pap smear screening activities at the HKBP Jatisampurna Church

#### 1. Number of participants who attended the outreach and screening.

Fifty female participants from the HKBP Jatisampurna Church community participated in this activity, with the majority aged between 22 and 70 years, which aligns with the target age for cervical cancer screening.

#### 2. Participant knowledge and attitudes.

Following the outreach, participants' knowledge about the importance of Pap smears, cervical cancer risk factors, and the screening process increased. Most participants demonstrated positive attitudes and were enthusiastic about participating in the screening.

Data on the increase in participants' knowledge of the importance of maintaining heart health are presented in Table 1

**Table 1. Increase in participants' knowledge regarding Pap smear examinations**

Category	Frequency	Percentage (%)
Increased	36	72
No change	13	26
Decreased	1	2
Total	50	100

The above data indicate that the counseling activities were effective, as evidenced by the fact that the majority of participants (36 of 50; 72%) reported increased knowledge. Meanwhile, one person, based on the post-test results, experienced a decrease in score. Through interviews, we obtained information that they did not complete the post-test because at the time of filling it out, participants had to leave early for more important matters.

#### 3. Pap smear results.

Of all the participants who underwent the test, 48% had normal results, while 52% required follow-up due to abnormal results. All participants with abnormal results received referrals and education regarding medical follow-ups.

#### 4. Participant participation and response.

Participant responses were very positive, as evidenced by their enthusiasm during the activity and desire to undergo regular screening in the future. Documentation of activities is shown in Figure 1.



**Figure 1. Documentation of Activities**

Community service activities involving health education and Pap smear screenings at the HKBP Jatisampurna Church in Bekasi have demonstrated positive results in increasing the knowledge and participation of female congregants in early cervical cancer detection. Participants' increased understanding of cervical cancer, risk factors, and the importance of Pap smears reflects the effectiveness of the educational approach delivered in a direct and interactive manner within the community. The results of this activity align with the health promotion theory, which states that increased knowledge is a crucial initial factor in shaping health attitudes and behaviors. According to Notoatmodjo (2018), health education delivered in a contextual and accessible manner can increase individual awareness, ultimately leading to healthier behavioral changes. In this activity, the presentation of material tailored to the participants' characteristics and the inclusion of discussion sessions enabled participants to better understand the information provided and reduce misunderstandings related to Pap smear screening.

In addition to increasing knowledge, this activity also successfully increased participant participation in Pap smear screening. This demonstrates that providing screening services directly at an activity site can overcome several key barriers that have historically contributed to low screening coverage, such as limited access, cost, and reluctance to visit health facilities. This finding aligns with previous research indicating that integrating health education with community-level screening services can increase women's compliance and participation in early cervical cancer detection (Setyarini et al., 2020). The selection of churches as locations for community service activities also

positively affected participant acceptance. Religious institutions play a strategic role in shaping social norms and public health behaviors. Activities conducted within a church environment tend to be more readily accepted because of a sense of security, trust, and emotional closeness within the congregation. This supports the view that a community-based approach is an effective strategy for implementing promotive and preventive programs, particularly for reproductive health issues, which are still considered sensitive by some communities.

Although this study demonstrated encouraging results, several limitations warrant consideration. The activity was conducted over a limited time period and involved only one community with a relatively small number of participants therefore, the results cannot be widely generalized. Furthermore, the knowledge improvement evaluation was conducted descriptively without using standardized quantitative measurement instruments. Therefore, follow-up activities with a broader scope and more structured evaluation methods are needed to assess the long-term impact of changes in routine Pap smear screening behavior. Overall, this community service activity demonstrates that health education combined with Pap smear screening services at the community level is an effective approach for increasing women's awareness and participation in early cervical cancer detection. The results of this study are expected to serve as a basis for developing similar programs in other communities and support government efforts to reduce the incidence and mortality of cervical cancer by increasing screening coverage.

## CONCLUSION

Community service activities, including education and Pap smear screenings at the HKBP Jatisampurna Church in Bekasi, have successfully increased public knowledge and awareness, particularly among women, of the importance of early cervical cancer detection. Participation was high, and the test results showed that most participants had normal results, but those with abnormal results still needed attention and follow-up. This activity demonstrated that an educational approach and free screening services can encourage greater public awareness of reproductive health. It is hoped that this activity will be the first step in increasing ongoing awareness and regular participation in cervical cancer screening as well as strengthening the relationship between health workers and the church community in disease prevention efforts.

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### Conflict of Interest declaration

The authors declare no conflict of interest related to the research, authorship, or publication of this article.

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