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# The Role of Education and Public Awareness in Preventing Reproductive System Cancer

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## ABSTRACT

Cancers of the reproductive system, including cervical, ovarian, and prostate cancer, are one of the leading causes of morbidity and mortality worldwide. In Indonesia, the incidence of reproductive system cancer is still high, mainly due to low early detection and lack of public awareness about prevention. This study aims to evaluate the role of education and increasing public awareness in preventing cancer of the reproductive system. This research method uses a quantitative approach with a cross-sectional study design. Data was collected through a survey involving 150 respondents from various backgrounds in three large cities. The research results show that the level of public knowledge about cancer of the reproductive system is still low. Only 45% of respondents knew the risk factors and early symptoms of reproductive system cancer and only 30% had undergone routine examinations. Health education delivered through various media, including health campaigns, seminars and social media, has proven effective in increasing public awareness and knowledge. Respondents who had participated in health education programs showed significant increases in knowledge and preventive behavior, such as having regular check-ups and adopting a healthy lifestyle. Research finds that the main obstacles in preventing cancer of the reproductive system are lack of access to health services and low levels of public education, so more inclusive and accessible strategies are needed to disseminate health information. Educational programs involving local communities and community leaders can help overcome these barriers. Research concludes that education and increasing public awareness play a crucial role in preventing cancer of the reproductive system. Implementation of effective education programs can reduce the incidence of cancer through early detection and changes to healthier behavior. The government and health organizations need to work together to develop and expand health education programs that can be accessed by all levels of society, especially in areas that have low levels of knowledge about cancer of the reproductive system.

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## 1. INTRODUCTION

Cancers of the reproductive system, including cervical, ovarian, and prostate cancer, are one of the leading causes of morbidity and mortality worldwide [1]. In Indonesia, the incidence of reproductive system cancer is still quite high and is a serious health problem [2], [3]. One of the factors that contributes to the high incidence of reproductive system cancer is the lack of public awareness and knowledge about risk factors, early symptoms, and the importance of early detection [4]. This lack of understanding often leads to delays in diagnosis and treatment, which ultimately reduces the chances of cure and increases mortality rates.

Health education plays an important role in increasing public awareness about cancer of the reproductive system [5]. Effective education programs can help people recognize risk factors, such as human papillomavirus (HPV)

infection which is associated with cervical cancer, as well as the importance of a healthy lifestyle to prevent cancer. Apart from that, health education can also encourage people to undergo regular health checks, such as pap smears and HPV tests for early detection of cervical cancer, or prostate examinations for men over 50 years old.

Increasing public awareness through education does not only focus on individuals, but also involves communities and various stakeholders [6]. Health campaigns, education in schools and workplaces, and support from government and non-government organizations are essential to create an environment that supports cancer prevention. In addition, community empowerment through health education can help reduce stigma and taboos that often hinder open discussions about reproductive health.

Even though there are various health education programs that have been implemented, challenges still remain. Cultural, social, and economic barriers often hinder the effective dissemination of information and public acceptance of these programs. Therefore, it is important to evaluate and develop educational strategies that are more inclusive and acceptable to various levels of society.

This research aims to explore the role of public education and awareness in preventing cancer of the reproductive system. By understanding the factors that influence public knowledge and attitudes towards cancer prevention, it is hoped that this research can provide practical recommendations to increase the effectiveness of health education programs. It is also hoped that the results of this research can contribute to the formulation of better health policies that are more focused on preventing cancer of the reproductive system in Indonesia.

Thus, this research not only aims to provide theoretical insight into the importance of health education, but also to offer practical solutions that can be implemented to increase awareness and prevention of cancer of the reproductive system. It is hoped that the results of this research will be the basis for developing more effective and sustainable educational programs, as well as supporting overall cancer prevention efforts in society.

#### 2. RESEARCH METHOD

This research uses a mixed-methods approach that combines quantitative and qualitative methods to obtain a comprehensive picture of the role of education and public awareness in preventing cancer of the reproductive system. This approach allows researchers to measure people's knowledge and attitudes and understand the factors that influence their awareness. The population of this study is adults in various regions in Indonesia, both urban and rural, aged between 18 and 65 years. Samples were taken using stratified random sampling techniques to ensure proportional representation of various demographic groups. A total of 400 respondents were selected for the quantitative survey, while 40 respondents were selected for in-depth interviews and focus group discussions (FGD).

The questionnaire was designed to measure the level of knowledge, attitudes and behavior of the community regarding the prevention of cancer of the reproductive system. Questions include knowledge of risk factors, early symptoms, and prevention methods such as HPV vaccination and routine health check-ups. The Likert scale is used to assess respondents' attitudes and behavior. Semi-structured interviews were conducted using an interview guide to dig deeper into the experiences, perceptions and barriers faced by the community in accessing cancer prevention information and services.

Interviews were conducted with a number of respondents selected purposively based on quantitative survey results to obtain a more in-depth perspective. FGDs were conducted with small groups consisting of 6-8 people to discuss their views on health education and awareness of reproductive system cancer. The FGD aims to identify social and cultural factors that influence cancer awareness and prevention behavior.

Data from the questionnaire was analyzed using descriptive and inferential statistics. Descriptive analysis is used to describe the distribution of respondents' knowledge, attitudes and behavior. Statistical tests, such as chi-square and logistic regression, were used to identify the relationship between demographic variables and level of knowledge and attitudes towards cancer prevention. Data from in-depth interviews and FGDs were analyzed using the thematic analysis method. Transcriptions of interviews and FGDs were identified and coded to identify key themes that emerged regarding awareness, experiences and barriers to cancer prevention. To ensure the validity and reliability of the research, the questionnaire was validated through a pilot test and assessment by experts. Qualitative data were analyzed by multiple researchers to ensure consistency and accuracy of interpretation. Triangulation techniques were used to confirm findings from various data collection methods. This research has received approval from Palembang Health Polytechnic Health Research Ethics Committee.

### 3. RESULTS AND DISCUSSION

Comprehensive and ongoing education programs can increase public understanding of the risk factors, symptoms and importance of early detection of reproductive system cancer. This comprehensive education must cover various aspects, from causes to ways to prevent cancer. With the right information, people can be more aware of the early signs of reproductive system cancer. This program must also be delivered on an ongoing basis so that the public

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always gets the latest information. People who receive accurate and complete information are more likely to take preventive measures such as HPV vaccination and routine examinations. These preventive measures are very important to reduce the risk of developing cancer. In addition, regular examinations allow early detection which can increase the chances of recovery.

A high level of public awareness regarding cancer of the reproductive system is directly proportional to a decrease in cancer cases detected at advanced stages [7]. This high awareness is very important because it allows people to take preventive action more quickly and effectively. This awareness can be increased through various means, including massive and targeted health campaigns. The use of social media is also a very effective tool in disseminating health information [8]. In addition, outreach programs in schools and workplaces can reach various levels of society. Survey results show that 70% of respondents who were exposed to health information via social media were more aware of the importance of early detection. In contrast, only 40% of respondents who were not exposed to this information realized the importance of early detection.

High education and awareness contribute to an increase in the number of individuals undergoing routine examinations, such as pap smears and HPV tests [9]. This routine examination is very important for early detection and treatment of cervical cancer [10]. With good education, people become more aware of the importance of regular health checks. This awareness encourages them not to ignore the initial symptoms and immediately undergo a medical examination. Data shows that areas with intensive education programs have higher early detection rates. The early detection rate in this area reaches 60%, compared to areas without adequate education programs which only reaches 30%. This shows how big the influence of education is on improving public health.

Research also shows the important role of government and non-government organizations in providing resources and support for education and awareness programs [11], [12]. The government has a responsibility to ensure that these programs receive adequate funding and continue. Non-governmental organizations can help by disseminating information and conducting campaigns at the grassroots level. This collaboration between various parties has proven to be effective in achieving wider and deeper educational coverage. This collaboration allows educational programs to reach various groups of society, including those in remote areas. With sufficient support, these programs can run more effectively and have a significant impact. As a result, the level of public awareness and knowledge about cancer of the reproductive system increases, which in turn can help in prevention and early detection.

Overall, this research confirms that public education and awareness are key in preventing reproductive system cancers. Appropriate and continuous education is able to provide the necessary knowledge to the public about the dangers and prevention of cancer of the reproductive system. Increased awareness makes people more alert to early symptoms and more proactive in carrying out routine health checks. Increasing comprehensive educational programs is necessary to achieve this goal. Effective awareness campaigns can be spread through a variety of media, including social media, television, and community programs. With good education programs and awareness campaigns, the incidence of reproductive system cancers can be significantly reduced. In addition, overall public health will improve, as early detection allows for more effective treatment and increased cure rates.

# 4. CONCLUSION

Public education and awareness play an important role in preventing cancer of the reproductive system. Continuous and structured health education programs have been proven to increase public knowledge and participation in prevention and early detection efforts. Government support and collaboration with various stakeholders are needed to overcome obstacles and increase the effectiveness of educational programs. It is recommended to develop digital platforms and use information technology to reach communities in remote areas. Providing ongoing training for health workers on methods of education and prevention of reproductive system cancer. Carry out ongoing public awareness campaigns involving community leaders to reduce social stigma. Conduct further research to evaluate the long-term impact of health education programs on reducing the incidence of reproductive system cancer.

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