

A Scoping Review of Factors Affecting Women of Childbearing Age in the Early Detection of Cervical Cancer

***Ismarwati¹, Soetrisno², Mulyanto³ and Sri Mulyani**

Abstract--- *Cervical cancer is a malignant disease, and a very significant cause of death in women, which is predominantly instigated by the human papilloma virus (HPV) infection. The World Health Organization (WHO) reported an incidence rate of 14 per 100,000 sufferers and 6.8 per 100,000 deaths worldwide. The high mortality rate is possibly reduced through a comprehensive approach, including prevention, early diagnosis, effective screening and participation in the treatment of cervical cancer early detection programs. Furthermore, early detection is known to be influenced by individual, structural and social factors. The purpose of this study, therefore, is to determine the factors that influence early detection of cervical cancer in fertile women. The method used consists of five stages, encompassing the identification of scoping review questions, with the PEOS framework, distinguishing relevant studies using inclusion and exclusion criteria, through databases (PubMed, EBSCO, ScienceDirect, Wiley) and grey literature, article selection using PRISMA flow charts and critical appraisal involves The Joanna Briggs Institute (JBI), mapping data, compiling, summarizing and result reporting. Furthermore, the seven selected literature fall into the grade A category, and then three themes emerged as a result of scoping review. These include individual factors (knowledge, attitudes, behavior, psychological), factors based on the facility providers (costs, health workers), and social influences (family support, friends, culture, religion). Conclusion: There are 3 factors assumed to inspire WCA to perform cervical cancer screening, comprising of individual, structural and social factors.*

Keywords--- *Factors, early detection of cervical cancer, women of childbearing age (WCA).*

I. INTRODUCTION

Cervical cancer is a malignant disease and one of the highest causes of death in women, which is instigated mainly by the human papilloma virus (HPV) infection [1]. This development has also been observed in those suffering from sexually transmitted infections, and the cancer is known to progress over a number of years, hence the need to undergo effective screening, for early detection [2]. The World Health Organization (WHO) reported an incidence rate of 14 per 100,000 women sufferers, and 6.8 per 100,000 deaths worldwide. This high mortality rate is possibly reduced using a comprehensive approach, which includes prevention, early diagnosis, effective screening and cervical cancer early detection treatment programs [3].

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According to the WHO, screening is expected to be conducted on women aged 21 years, in order to reduce deaths. However, the following considerations are assumed to influence early detection comprises of individual factors, which is based on interpersonal barriers to early detection, and generally includes poor awareness of facilities, personal factors, screening procedures and low income. In addition, the respondents also have a personal and psychological tendency towards postponing the screening procedure for fear of the possible test results [4].

Individual factors are knowledge, attitude, behaviour, and psychology. Furthermore, the lack of knowledge related to early detection is a major obstacle during screening, and the psychological aspect is also a cause for concerns while preparing for the process [5]. Conversely, the facility providers (costs, health workers) also termed health workers have an effect on screening decisions, as most women tend to prefer female doctors because they are considered to be more sensitive. This reduces the feeling of shame and also facilitates a more open communication [6]. Social factors (family support, friends, culture, and religion) as observed from the Asian cultural point of view, suggests that women of childbearing age (WCA) expected to follow the screening program are not permitted by the company during work hours because it is considered unimportant [7].

II. METHODOLOGY

This study uses a methodology for grouping review as suggested [8] and further developed [9]. The four reasons to scope a review include: (1) to examine the extent and nature of research activities, (2) determine the value of conducting a full systematic review, (3) summarize and disseminate findings and (4) to identify research gaps in the existing literature.

The stages of this scoping review include: (1) identifying research questions, (2) distinguishing the relevant studies, (3) article selection, (4) data mapping, and also (5) compiling, summarizing, and reporting results.

(1) Identifying Research Questions

This review is aimed at following the scoping review questions: What are the factors considered during the early detection of cervical cancer in women of childbearing age.

(2) Distinguishing the Relevant Studies

After identifying the research questions, the inclusion and exclusion criteria are determined as in Table 1.

Table 1: Inclusion and exclusion criteria

<i>Inclusion Criteria</i>	<i>Exclusion Criteria</i>
<ul style="list-style-type: none"> a. Articles published in the last 5-10 years b. Articles published in English or Indonesian c. Documents / reports / draft policies / guidelines from WHO / certain formal organizations d. Article that discusses early detection of cervical cancer e. The article discusses obstacles in the early detection of cervical cancer in women of childbearing age 	<ul style="list-style-type: none"> a. Opinion article b. Letters and book reviews c. Articles published in the last 10 years, but data collection in these articles is more than the last 10 years d. Articles with Indonesian / English titles but the content is in other languages

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In searching for relevant studies, the authors use 4 databases, including PubMed, ScienceDirect, EBSCO, and Wiley, as well as grey literature, which were searched from some websites. These include WHO and Google Scholar, using keywords identified by authors, and related to the scoping review topic during the search process. In addition, the keywords used are as follows: Barriers to women of childbearing OR Obstacles of reproductive women AND Early detection of cervical cancer OR Early Screening of cervical cancer. These were organized and the years on the page were filtered considering the abstract, human and English.

(3) Article Selection

The titles of literature studies from 4 databases were identified by thoroughly using the keyword. Furthermore, 372 articles were considered capable of contributing data related to the expected results. These were then screened according to the inclusion and exclusion criteria. Figure 1 outlines the process of article identification:

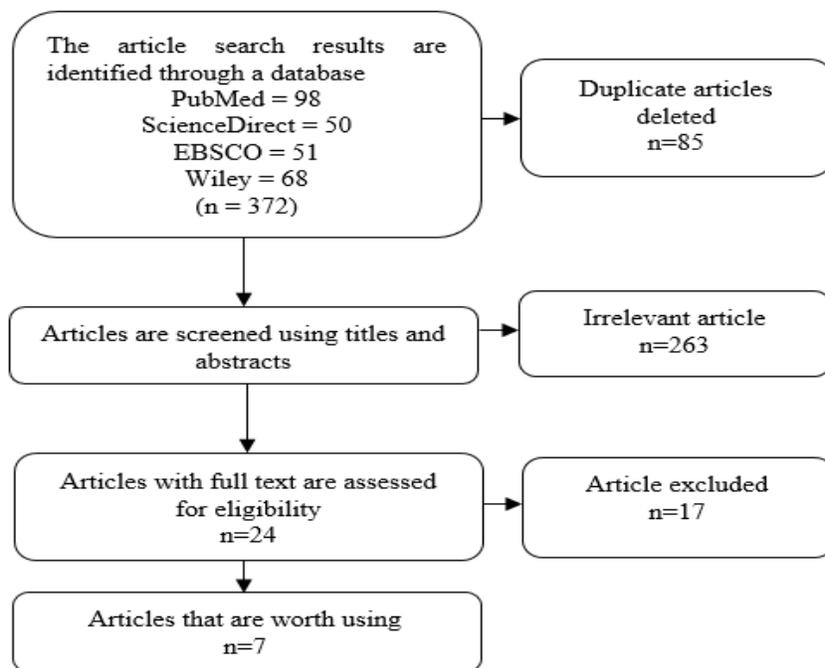


Figure 1. Prism Flowchart

(4) Mapping Data

Data from seven articles were extracted to obtain and sort the key information, including the title / author / year, research location, research objectives, methods, data collection, research population and significant findings or recommendations. In addition, the supervisor was consulted through the process of content analysis and theme creation.

(5) Arrange, Summarize and Report Results

In accordance with [9], the three stages of compilation, summary, and result reporting were also conducted. These were conducted in phases, initiated by the provision of descriptive numerical analysis, comprising the number of articles, the year of publication, and the type of study. This was followed by evaluating the strengths and weaknesses

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in the acknowledged literature, which was attained through a thematic analysis of studies included in the report. The final step involved conducting a review on the implications of findings in relation to future research, practice and policy.

III. RESULTS AND DISCUSSION

This review explores barriers of cervical cancer screening in women of childbearing age (WCA), which include individual, structural, and social factors.

(1) *Individual Factor*

a. **Knowledge of cervical cancer**

A poor knowledge on the topic of cervical cancer is one of the obstacles in of proper screening. A research conducted by [10] explained the impoverished understanding of participants with regards to the meaning and also the causes. This was illustrated by the individual attribution of the term as hip cancer, with similar condition of breast cancer. Furthermore, the perception was due to inadequate knowledge because of the invisible anatomical location of the cervix, compared to the breast. Also, Christian women in Nigeria believe that cervical cancer is possibly caused by sexual intercourse [11].

b. **Knowledge of cervical cancer screening**

The low level of knowledge about cervical cancer screening is influenced by ignorance of women in childbearing age about the health facilities providing the service [12]. Despite having an idea, some tend to not fully understand the purpose of screening. Meanwhile, those that perform the assessment aim to maintain personal calmness, which is not believed to be a preventive measure, hence it is considered as unnecessary on instances where there are no symptoms and signs. These perceptions were ascertained as the main causes of low participation [10].

c. **Psychology of WCA in cervical cancer screening test**

The psychology of WCA is also considered as an obstacle for screening, as participants were highly concerned about the disclosure of status from the results, and the fear of contracting other diseases within the Hospital environment. In addition, those on Low Middle Income Countries (LMICs) reported the feeling of anxiousness regarding the quality of the hospital setting and also the services provided [11]. Also, some women tend to feel embarrassed during screening. This is a major barrier, which is also experienced during examination by female doctors [10]. The low incidence of participation is also based on the fear of the screening results, alongside the thought of being assessed by male doctors, and language barriers [13].

d. **WCA beliefs in cervical cancer screening**

WCA's assume cervical cancer as sexually transmitted diseases, or an illness contracted during sexual intercourse with multiple partners. These perceptions influence women to not participate in screening programs. Also, WCA possess a belief that diagnosis is only important in the detection of already existing cancer, which have a tendency of being worse on treatment. The limited knowledge of possible treatment and the fear of receiving a positive diagnosis prompts the desire to avoid screening services [11]. In addition, there is also scepticism about the effectiveness of

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assessment tools and also on the procedures used to reduce the death risk of cervical cancer. A research conducted by [13] shows the confidence of WCA in the consequences of cancer, hence the preference to not know the diagnosis, due to the assumption that there are no preventive measures.

(2) Structural Factors

a. Screening service provider

Female doctors are presumed to have better sensitivity towards the health needs of women during conduction of Pap Smear screening services for cervical cancer, while the male counterparts are considered to be more understanding and sensitive [10]. The results of this investigation are supported by other studies [13] which show the consideration of male doctors as an obstacle in the screening process, because WCA feel embarrassed and nervous during examination.

b. Screening fee

Another influencing factor identified was the fee/cost, as the provision of free tests is expected to improve participation. This consideration has also been identified as one of the reasons for the WCA to ask their partner for permission [11], as married individuals tend to not use initiatives regarding personal health. This occurs because of the high reliance and support obtained from partners in making decisions related to cervical cancer screening, diagnosis, and treatment. Therefore, the possibility of participation depends on the partners' consent, and willingness to support women financially.

c. Logistics

Logistics was also considered to be an obstacle. This was mentioned in a research conducted by [10], which needs to be addressed in order to maximize participation in screening amongst Chinese-Australian WCAs. In addition, multifaceted interventions are known to overcome logistical barriers, e.g., transportation, hence WCAs with a household status admit the difficulty of visiting the screening facility alone. Hence the lack of transportation to the assessment location is one of the reasons for avoidance [13].

(3) Social Factor

a. Lack of knowledge related to cervical cancer screening and ways to access culture services

Participation in cervical cancer screening is related to a developing culture, which applies to the female reproductive organs. Moreover, involvements in discussions on a partners' sexual activity is considered taboo, which hinders the possibility of screening in many cultures [10]. Also, Asian culture tend to not allow permission by companies during working hours, as the process is considered unimportant [3].

b. Religion

Religion poses a very significant challenge in various developed countries, as Buddhist women tend to better utilize cancer screening health services with higher intensity than the Muslims. The latter are more inclined to experience a sense of shame, and also fear for the screening process. This practice enhances the certainty of Buddhist women

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regarding the absence of health problems, which eliminates the need to seek medical help, in contrast with the Muslim women [14].

This result is supported by researches from [15, 16], which reported on the unwillingness of Muslim women to take off their clothes for the pelvic examination needed during screening, especially the concerns of being inspected by male health workers. This perception is related to the religious teachings of Muslims, hence a preference for female doctors was reported by a majority of the respondent (78%) in a study conducted on the population in Kuwait. In addition, the specific traditions and lifestyles of Islamic culture and religion is assumed to shape women's actions, behaviors, health practices, beliefs, expectations, gender roles, and self-care [17, 18]. Hence, some (e.g., the Muslim WCA in Ondo) believe in the possibility of obtaining traditional treatments before visiting a health facility.

The majority of Christian WCAs have knowledge of cervical cancer screening, although a small number assume this procedure to be a prevention measure. However, some also believe that early detection is not beneficial because of the inability to remediate a positive diagnosis.

IV. CONCLUSION

This report shows a total of three factors that influence the performance cervical cancer screening in WCA. These include the individual factor, which is highly affected by the personal knowledge on the purpose for screening. Meanwhile, structural factor is based on the nature of the service providers, as WCA have a preference for female doctors. The third is social factor, which include the influence of religious teachings on participation. Based on the result and discussion, the following suggestions were made:

- a. There is need to improve the quality of health workers to support the cervical cancer screening programs. This is obtainable by providing adequate training to enable the provision of relevant information related to the importance of this process.
- b. It is also necessary to increase health promotion by the instatement of favorable government policies related to screening. This is because of the high population of WCAs with poor understanding on the purpose of examination.
- c. The target of promotion is focused on the WCA and also the individuals' partner, in order to ensure optimal support during the process.

ACKNOWLEDGMENTS

The author is grateful to Soetrisno, Mulyanto and Sri Mulyani from Sebelas Maret University for the help, guidance and advice provided during the preparation of this scoping review.

REFERENCES

- [1] B. Jerome-D'Emilia, P. Suplee, and D. Kushary, "A 10-Year Evaluation of New Jersey's National Breast and Cervical Cancer Early Detection Program: Comparison of Stage at Diagnosis in Enrollees and Nonenrollees", *J. Women's Heal.*, vol. 29, no. 2, (2020), pp. 230–236.

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- [2] R. Caspi, E. Schejter, and A. Groutz, "Screening for Cervical Cancer Among Low-Risk Populations: Orthodox Jewish Women as a Model", *J. Women's Heal.*, vol. 25, no. 7, (2016), pp. 747–751.
- [3] H. K. Chang et al., "Factors associated with participation in cervical cancer screening among young Koreans: A nationwide cross-sectional study", *BMJ Open*, vol. 7, no. 4, (2017), pp. 1-10.
- [4] C. Binka, S. H. Nyarko, K. Awusabo-Asare, and D. T. Doku, "Barriers to the Uptake of Cervical Cancer Screening and Treatment among Rural Women in Ghana", *Biomed. Res. Int.*, vol. 2019, (2019), pp. 1-8.
- [5] A. Kissal and A. Beser PhD, "Perceptions of Barriers and Facilitators of Cervical Cancer Early Detection Behaviors among Elderly Women", *Int. J. Caring Sci.*, vol. 7, no. 1, (2014), pp. 157–168.
- [6] Y. L. Jayasinghe et al., "The Association Between Unwanted Sexual Experiences and Early-Onset Cervical Cancer and Precancer by Age 25: A Case-Control Study", *J. Women's Heal.*, vol. 26, no. 7, (2017), pp. 774–787.
- [7] F. L. Wong and J. W. Miller, "Centers for Disease Control and Prevention's National Breast and Cervical Cancer Early Detection Program: Increasing Access to Screening", *J. Women's Heal.*, vol. 28, no. 4, (2019), pp. 427–431.
- [8] H. Arksey and L. O'Malley, "Scoping studies: Towards a methodological framework", *Int. J. Soc. Res. Methodol. Theory Pract.*, vol. 8, no. 1, (2005), pp. 19–32.
- [9] D. Levac, H. Colquhoun, and K. K. O'Brien, "Scoping studies: Advancing the methodology", *Implement. Sci.*, vol. 5, no. 1, (2010), pp. 1-9.
- [10] C. Kwok, K. White, and J. K. Roydhouse, "Chinese-Australian Women's Knowledge, Facilitators and Barriers Related to Cervical Cancer Screening: A Qualitative Study", *J. Immigr. Minor. Heal.*, vol. 13, no. 6, (2011), pp. 1076–1083.
- [11] F. I. Modibbo et al., "Qualitative study of barriers to cervical cancer screening among Nigerian women", *BMJ Open*, vol. 6, no. 1, (2016), pp. 1-13.
- [12] N. Ali et al., "Barriers to uptake among high-risk individuals declining participation in lung cancer screening: A mixed methods analysis of the UK Lung Cancer Screening (UKLS) trial", *BMJ Open*, vol. 5, no. 7, (2015), pp. 1-10.
- [13] M. Akinlotan, J. N. Bolin, J. Helduser, C. Ojinnaka, A. Lichorad, and D. McClellan, "Cervical Cancer Screening Barriers and Risk Factor Knowledge Among Uninsured Women", *J. Community Health*, vol. 42, no. 4, (2017), pp. 770–778.
- [14] A. Gottschlich et al., "Barriers to cervical cancer screening and acceptability of HPV self-testing: A cross-sectional comparison between ethnic groups in Southern Thailand", *BMJ Open*, vol. 9, no. 11, (2019), pp. 1-10.
- [15] H. Arksey and L. O'Malley, "Scoping studies: Towards a methodological framework", *International Journal of Social Research Methodology: Theory and Practice*, vol. 8, no. 1, (2005), pp. 19–32.
- [16] M. Akinlotan, J. N. Bolin, J. Helduser, C. Ojinnaka, A. Lichorad, and D. McClellan, "Cervical Cancer Screening Barriers and Risk Factor Knowledge Among Uninsured Women", *Journal of Community Health*, vol. 42, no. 4, (2017), pp. 770–778.
- [17] A. B. Bansal, A. P. Pakhare, N. Kapoor, R. Mehrotra, and A. M. Kokane, "Knowledge, attitude, and practices related to cervical cancer among adult women: A hospital-based cross-sectional study", *J. Nat. Sci. Res. Biochem. Med.*, 6(2), (2015), 324-328.
- [18] T. Al-Muammar, M. N. Al-Ahdal, A. Hassan, G. Kessie, D. D. Cruz, and G. E. Mohamed, "Human papilloma virus-16/18 cervical infection among women attending a family medical clinic in Riyadh", *Ann. Saudi. Med.*, 27(1), (2007), 1-5.

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