

CERVICAL CANCER SCREENING BARRIERS AMONG WOMEN IN DEVELOPING COUNTRIES: A SYSTEMATIC REVIEW

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Abstract: Background: Cervical cancer is one of the most serious problem in woman's life. Estimated that more than one million women worldwide have cervical cancer. In developing countries 12 percent of all cancer cases is cervical cancer. Screening is the most proven method to prevent cervical cancer. The aim of this review was to determine the barriers that prevent women from undergoing cervical cancer screening in developing countries. Method: We searched the two major databases, PubMed and ProQuest. This review included for papers published in English up to 2013 until 2018, with keywords: "barrier", and "cervical screening", or "Pap smear", or "cervical control", combined with (ie. AND) "developing country". Results: from 851 studies, finally 16 included for review. Seven from sixteen studies are cross sectional, seven qualitative study, one descriptive study and one is integrative review. Conclusion: There are some barriers that prevent women's participation cervical cancer screening, such as personality, religious culture, and health facility. Most studies found that the barrier that prevents women from cervical cancer screening are personal factors such as fear, anxiety, embarrassment, shame.

1 INTRODUCTION

Cervical cancer is one of the most serious problem in woman's life. Estimated that more than one million women worldwide have cervical cancer. In developing countries 12 percent of all cancer cases is cervical cancer. Screening is the most proven method to prevent cervical cancer. Cervical cancer is an important public health problem for adult women in developing countries in South and Central America, sub-Saharan Africa, and south and south-east Asia, where it is the most or second most common cancer among women. Approximately 70% of the global burden of cervical cancer is in developing countries (Compaore et al., 2016). For example in Turkey, it is the third most common type of cancer among gynecological cancers, with an incidence of 4.5 cases per 100000 (Cetisli, Top, & Işık, 2016).

Cervical cancer can detected in early stage and can be cure medically. Because the period of cancer cell formation takes a long time, therefore early detection is consider very important to prevent the

formation of cancer cells. One of cervical cancer screening is Pap smear. In developing countries have long used pap smear method, in addition to the relatively affordable price, pap smear is a method that is effective enough to detect abnormalities of female reproductive organs. The incidence of cancer is decreasing in developed countries. However, in developing countries, cervical cancer is still a serious problem for the government. This is due to a variety of factors including in terms of health services, poor screening programs, personality issues (lack of knowledge, lack of awareness, fear, anxiety, embarrassment, shame, etc), cultural and religious cultural issues, and other problems that hinder women to screen for cervical cancer (Cetisli et al., 2016).

The aim of this systematic review is was to determine the barriers that prevent women from undergoing cervical cancer screening in developing countries.

2 METHOD

We searched the two major databases, PubMed and ProQuest. This review included for papers published in English up to 2013 until 2018. Medical subject headings or text word used in the searches were "barrier", and "cervical screening", or "Pap smear", or "cervical control", combined with (ie. AND) "developing country". The extraction from PubMed and ProQuest was restricted to original studies and systematic review that focused barriers cervical cancer screening with women living in developing countries.

Search Strategy

The study findings are using ProQuest and Pubmed, with keywords: "barrier", "cervical screening", "Pap smear", "cervical control", "developing country".

Data extraction

The selected papers were reviewed according to PICO framework and the following papers were extracted in a compilation table: general information about study (title of papers, first author's name, year of publication, and study design); information about the study population (genre, and sample size); information about study instrument and intervention; information about the study outcome (barriers that affect women do not screening), and information the place where the study was done (developing countries).

Assessment of the Studies

Eligibility

The following inclusion criteria were considered: 1) Women were living in developing countries; 2) Papers were published between 2013 until 2018; 3) Papers in English. This systematic review are qualitative or quantitative research that addresses the barrier for women to perform cervical cancer screening in terms of personal, cultural and religious cultures, as well as in terms of health facilities in developing countries.

Selected studies had assessed by study design, selection bias, data analysis, and data collection method. From those items, each item was rated as "weak", "moderate", or "strong". As consequence, the study would be "high quality" if three of them were strong, with no weak. If there was only one weak, study would be "moderate quality", and if

there were more than one items rated weak, the study would be "low quality".

3 RESULT

Included Studies

Seven from sixteen studies are cross sectional, seven qualitative study, one descriptive study and one is integrative review. Studies selected for this review obtained by American Association for Cancer Education (Compaore et al., 2016), Icahn School of Medicine at Mount Sinai, New York, United States (Aharon, Calderon, Solari, Alarcon, & Zunt, 2017), Center for Global Health, National Cancer Institute, Bethesda, MD, USA (Harford, 2015), Izmir Katip Celebi University, Faculty of Health Sciences, Izmir, Turkey (Cetisli et al., 2016), BioMed Central (Dhendup & Tshering, 2014), Department of Public Health Sciences, Queen's University, Kingston, Ontario, Canada (Cunningham et al., 2015), Clinical Journal of Oncology Nursing (Lee, Kang, & Ju, 2016), Nursing and Midwifery Care Research Centre (Kohan, Mohammadi, Mostafavi, & Gholami, 2016), Maternity Unit, Kumba District Hospital, Cameroon (Asonganyi et al., 2013), College of Nursing and Public Health, Adelphi University, Garden City, NY, USA (McFarland, Gueldner, & Mogobe, 2016), Department of Disease Control and Environmental Health, School of Public Health, College of Health Sciences, Makerere University, Uganda (Ndejjo, Mukama, Kiguli, & Musoke, 2017), Department of Gynecology and Obstetrics, Tongji Hospital, Wuhan (Jia et al., 2013), Gaziosmanpasa University Tokat Health High School (Kıssal & Beşer, 2014), Department of Community Medicine, Bharati Vidyapeeth Deemed University Medical College, India (Kadam, Dhobale, Gore, & Tripathi, 2014), Department of Geography, Western University, Canada (Kangmennaang, Thogarapalli, Mkandawire, & Luginaah, 2015), Division of Cancer Prevention and Control, Epidemiology and Applied Research Branch, Centers for Disease Control and Prevention, USA (Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017), Women's Health Research Program and Biostatistics Unit, School of Public Health and Preventive Medicine, Monash University, Australia (Islam, Bell, Billah, Hossain, & Davis, 2015).

Quality Assessment

Eight studies rated "weak" in study design because were cross sectional, one study is

“moderate”, because it was an integrative review, and seven studies rated “strong” because were qualitative. Nine studies rated “moderate” in data collection method because based on surveys, and seven studies rated “strong”. Four studies rated

“strong” in selections bias because had representative samples and twelve studies rated “moderate”. All studies rated “strong” in analysis conformity

Study Characteristic

Table 1: Study Characteristic

| No | Title | Study Design | Sample | Instrument/ intervention | Outcome | Place |
|----|--------------------------|------------------------|--|--|-------------------------------------|--------------|
| 1 | Compaore et al., 2016 | Cross-sectional study | 351 respondents | Questionnaire In depth interview | Personality | Burkina Faso |
| 2 | Cetisli et al., 2016 | Descriptive study | 210 respondents | Questionnaire (Health Belief Model Scale) Interview | Facility Personality | Turkey |
| 3 | Dhendup & Tshering, 2014 | Cross-sectional study | 559 respondents | Questionnaire | Personality | Bhutan |
| 4 | Cunningham et al., 2015 | Cross-sectional study | 303 rural and 272 urban dwelling women | Questionnaire | Facility | Tanzania. |
| 5 | Kohan et al., 2016 | Qualitative study | 17 respondents | In depth interview Questionnaire | Facility | Iran |
| 6 | McFarland et al., 2016 | The integrative review | 224 articles | CINAHL, PubMed, MEDLINE, ProQuest, and PsycINFO | Personality Facility | Sub-Saharan |
| 7 | Ndejjo et al., 2017 | Qualitative study | 119 respondents | Questionnaire Group discussions Key informant interviews | Personality Socioeconomic | Uganda |
| 8 | Jia et al., 2013 | Cross-sectional study | 5936 respondents | Questionnaire Face to face interviews | Personality | China |
| 9 | Amos D Mwaka, 2013 | Qualitative study | 10 women and 5 men | Key informant interviews | Personality Facility | Uganda |
| 10 | Kıssal & Beşer, 2014 | Qualitative study | 21 women | In depth interviews | Personality Facility | Turkey |
| 11 | Modibbo et al., 2016 | Qualitative study | 27 Christian and 22 Muslim women | In person interview Focus Group Discussions (FGDs) | Religion Facility Personality | Nigerian |
| 12 | Teng et al., 2014 | Cross-sectional, | 6 key-informant | Interviews FGDs | Personality Stigma | Uganda |

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|----|--------------------------------|---|------------------------------------|---------------------------------------|---|-----------|
| | | qualitative study | health workers and 16 local women, | | | |
| 13 | Kadam et al., 2014 | Cross-Sectional study | 281 women | Questionnaire Home visit | Personality | India |
| 14 | Kangmennaang et al., 2015 | Hierarchical binary logit regression models | 6542 women | Namibia Demographic and Health Survei | Personality | Namibia |
| 15 | Buchanan Lunsford et al., 2017 | Qualitative study | 60 women and 40 male partner | Focus Group Discussion (FGDs) | Socioeconomic Personality Religious or cultural beliefs Facility | Kenya |
| 16 | Islam et al., 2015 | Cross-sectional study | 1,590 respondents | Questionnaire | Personality | Banglades |

4 DISCUSSION

From the review of selected journals, several barriers have been found that cause women not to screen for cervical cancer in developing countries and we try to conclude that it is a matter of health facilities, from personal, cultural, religious and other factors.

Health facility

Cervical cancer is the most common cancer in women in developing countries, this caused by the lack of regulation in the early phase of cervical cancer (screening). There are several issues, ranging from difficulty in reaching health facilities (Cetisli et al., 2016) to health resource problems.

The first is barriers of the existence of health facilities. Some respondents stated that one of the obstacles he had to do the screening was the location of the facilities far enough and costly enough. For people living in rural areas in developing countries difficulties in terms of financing in order to screening. They have to travel a great distance and in some cases they have to go through a difficult path than women living in urban areas, this is due to unequal health facilities (Amos D Mwaka, 2013; Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017). Another barrier is in terms of travel time. A woman intending to take her time to travel in order to screen, must be willing to give up her job and family responsibilities (Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017).

In some regions of the developing world, the availability of geneticists is also a barrier. For

example according to a study conducted at Gulu Hospital, Uganda, there is no gynecologist as a decision maker (Amos D Mwaka, 2013). This related to the results of screening that takes a long time. It can sometimes take months to get results from screening (Amos D Mwaka, 2013). This can lead to a decrease in the interest of the community (women) to screen. Currently in developing countries, there has been screening at each community health service center that aims to keep people from traveling long distances to get health services. Public health service centers organized by the government are the people's preferred choice for finding sources of information and health checks on mild cases. However, the presence of students who undergo educational practices into consideration of the public to check the health status, especially women who want to find information or undergo examination related reproductive function. Women from capable families who wish to consult reproductive health prefer to check in private clinics rather than community health centers, the reason being in the clinic is not a place for educational practice and may be consulted personally by a specialist. This related to privacy (Kohan et al., 2016).

The second barrier is in terms of health personnel resources. In developing countries, public health service centers are the first choice for people to obtain information and health measures. Therefore, public health service workers have a level of stressor that tends to be higher than private service centers due to the number of client arrivals. This has an impact on the performance of health workers to be less friendly in dealing with clients. (Kohan et al., 2016). Gender of a health worker who performs

screening is also a consideration for screening for cervical cancer (Modibbo et al., 2016). A woman who checks reproductive function prefers to be examined by female health workers rather than male, this is related to privacy and religious beliefs. Mistakes in providing information by health care providers to clients are also important in terms of providing women with the right knowledge.

Another barrier that usually arises in the connection of health resources with cervical cancer screening is the encouragement to the community both men and women, this support can be counseling using media that is easily found or obtained by the community. Study conducted by Melissa S Cunningham with the results, more than half (67%) of respondents did not know that there is cervical cancer screening. This indicates a lack of equitable information on cervical cancer prevention (Cunningham et al., 2015). Health support aims to increase knowledge about the importance of cervical cancer management.

Personality

Lack of knowledge and lack of awareness are key barriers in the presence of cervical cancer screening in developing countries (Compaore et al., 2016; Aharon et al., 2017; Dareng et al., 2015; Kadam et al., 2014; Islam, Bell, Billah, Hossain, & Davis, 2015). Many studies are conducted in developing countries regarding the level of knowledge and awareness of screening. This caused by many factors, one of which is the level of education and area of residence. Research conducted by Salomon Compaore, which discusses the level of knowledge about cervical cancer screening. Obtained level of knowledge about cervical cancer screening of urban community (41,5%) better than society living in rural (17%). Respondents who had had cervical cancer screening tended to have higher knowledge and had better jobs than those who did not screen, and most of those screened were women living in urban settings.

Study in Tanzania found a level of knowledge about cervical cancer screening is lower in rural areas than women in urban areas. Research conducted by Neha Tripathi in India states, only 30% of respondents know about cervical cancer screening, the rest answered did not know and felt does not require screening cervical cancer (Kadam et al., 2014). The level of education also affects a woman doing cervical cancer screening. A study in Ghana found a higher screening rate in college students (Compaore et al., 2016).

The other barrier is the client feeling embarrassed. In this case it can be said that a woman may feel embarrassed by the public's view or the negative stigma of reproductive disease (Teng et al., 2014; Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017) and ashamed of the screening process itself (Dhendup & Tshering, 2014; Amos D Mwaka, 2013; Kissal & Beşer, 2014; Teng et al., 2014; Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017). In general, people argue that a woman who gets cervical cancer caused by deviant behavior

The screening process is also the reason why women do not screen, as they are required to show their vital organs to other people, especially with male health workers. Respondents tend to feel ashamed to provide information about complaints or screening for cervical cancer if with male health officers (Dhendup & Tshering, 2014). It is also associated with the issue of decency (Dareng et al., 2015). Shaikh and Hatcher suggest private health services should be more effective than public services in developing countries because of the availability of personal care for illnesses and problems that can lead to stigmatization in the community (Goss et al., 2013; Kohan, Mohammadi, Mostafavi, & Gholami, 2016).

In some studies also mentioned that they do not require screening for cervical cancer because they feel no risk of cervical cancer (Dhendup & Tshering, 2014; McFarland, Gueldner, & Mogobe, 2016). For example study conducted Tshering Dhendup (Dhendup & Tshering, 2014). More than half of respondents said they did not require cervical cancer screening.

Another obstacle is that women are usually afraid of screening (Dhendup & Tshering, 2014; Ndejjo et al., 2017; Dareng et al., 2015; Teng et al., 2014; Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017). Although they are at risk for cervical cancer, they prefer not to know their reproductive health rather than having to bear the burden with positive test results (Dareng et al., 2015). This can lead stigma of society if they get a positive examination result (Teng et al., 2014). Another thing women fear if they get a positive result is the rejection of their spouse or partner. For single women they are afraid the screening process can cause damage to their vital organs (Buchanan Lunsford et al., 2017).

Fears related to receiving positive screening results were considered potential barriers by both men and women. These include not knowing what to do next if found to have cervical cancer; not being

able to pay for treatment; psychological effects; and being stigmatized by their spouse, family, and community. Some of these findings are consistent with those from a study of Kenyan leaders and parents, who reported that diseases affecting genital regions of the body can be associated with shame and stigma (Harford, 2015). They are also fear of contracting another diseases caused by procedure in the screening process (Buchanan Lunsford et al., 2017).

Socioeconomic

In general, reported barriers to cervical cancer screening were similar among rural and urban women. Similar to findings from other studies in developing countries the primary barrier to being screened was not knowing that preventative screening tests existed, along with socioeconomic factors (Compaore et al., 2016; Cunningham et al., 2015; McFarland et al., 2016; Ndejjo et al., 2017; Kangmennaang et al., 2015; Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017)

This can be attributed to the distance of health facilities far enough and the costs they must spend in order to get cervical cancer screening. An example is Caprivi, Namibia, which is still low cervical cancer screening. Geographically, Namibia is a large country that raises the question of physical access to health care especially in areas like Caprivi, which are remote and impoverished. This may explained why women from this region are less likely to screening. In many of the poor and remote areas of Namibia, the population (41%) must travel within 5 km to reach the nearest health facility (Kangmennaang et al., 2015).

In another studies, money is one of the reasons why they do not screen. Most respondents stated that screening is too expensive and if there are free screening services, they still have to pay for administrative fees or other expenses (Buchanan Lunsford et al., 2017). Although not everyone in developing countries has low economic levels, the fact that financial factors are still a barrier to cervical cancer screening.

Culture and religion

Developing countries have varied cultural and religious variations. Some women expressed that they did not go for the test because screening is against their cultural and religious beliefs (McFarland et al., 2016; Dareng et al., 2015; Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017). Other women held religious values and beliefs that did not encourage them to expose

their bodies to men (i.e., physicians) other than their husbands (McFarland et al., 2016). The results of Focus Group Discussion (FGDs) conducted by Fatima Isa Modibbo in Nigeria, the respondents stated the norm of cultural decency as a barrier to screening cervical cancer; However, participants in the Muslim FGDs were strictly not to screen for cervical cancer on the grounds of religious belief (Dareng et al., 2015).

Community stigma

Cervical cancer is associated with deviant sexual behavior that makes poor public opinion of women with the disease. The community's negative stigma about cervical cancer can be a barrier for women to screen for cervical cancer (Teng et al., 2014; Buchanan Lunsford, Ragan, Lee Smith, Saraiya, & Aketch, 2017).

5 CONCLUSION

There are some barriers that prevent women's participation cervical cancer screening, such as personality, religious culture, and health facility. Most studies found that the barrier that prevents women from cervical cancer screening are personal factors such as fear, anxiety, embarrassment, shame.

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