

REVIEW ARTICLE

Barriers and Facilitators Factors to Uptake of Cervical Cancer Screening Among Women in Low- and Middle-income Countries: A Narrative Review

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ABSTRACT

Cervical cancer is a worldwide health issue. Each year, it kills hundreds of thousands of women worldwide. Despite the availability of screening tests, the incidence of cervical cancer remains high in low and middle-income countries. In this review, we survey the current literature on factors affecting cervical cancer screening uptake among women in low and middle-income countries. It also highlights potential strategies for improving screening uptake and suggests directions for future research. Knowledge about cervical cancer and its screening, socio-demographic factors, personal and behavioural factors, cultural factors and beliefs, and health service factors are considered the main barriers and facilitators to cervical cancer screening uptake among women in low and middle-income countries. Understanding the facilitators and barriers to cervical cancer screening encountered by women in low and middle-income countries can improve screening uptake by overcoming inequalities in resource and information access. Culturally sensitive screening programs, improvement of the health system, and health education interventions to raise awareness of screening and its benefits can be effective strategies to improve screening uptake among women in low and middle-income countries.

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INTRODUCTION

Cervical cancer is a worldwide health issue. Cervical cancer is the fourth most frequent malignancy among women worldwide, with an estimated 604 000 new cases and 342 000 deaths in 2020, with low- and middle-income countries accounting for approximately 90% of new cases and fatalities (1). Cervical cancer is when abnormal cells in the lining of the cervix grow in an uncontrolled way and eventually form a growth (tumour). This disease may be prevented, and certain good screening programmes may result in lower morbidity and mortality (2).

The main cause of cervical cancer is chronic infection with the oncogenic human papillomavirus (HPV). HPV infection is usually temporary, but where it persists, it may induce precancerous changes to the cervix. If these modifications are not treated, they will progress to cancer. Early diagnosis of cervical cancer enables it to

be prevented and/or cured due to its long pre-invasive period and the availability of screening tests. There are various methods of cervical cancer screening which include: Pap test, human papillomavirus (HPV) DNA testing, liquid based cytology, and visual inspection to detect pre-cancerous lesions in the cervix before development of cervical cancer. This review will focus on the Pap test, which is the most commonly used screening technique on a global scale. The Pap test, also called cytologic screening, has a sensitivity and specificity of 75.80% and 98.05% respectively (3).

Every five years, from the ages of 25 to 65, for anyone with a cervix, the American Cancer Society (ACS) advises cervical cancer screening with an HPV test alone. People can be screened with an HPV/Pap co-test every 5 years or a Pap test every 3 years if HPV testing alone is not available (4). Cervical cancer incidence can potentially be minimised by up to 90% in areas of high screening efficiency and coverage. Cervical cancer incidence has decreased in developed countries as a result of extensive screening programs. However, the incidence of cervical cancer is still high in developing countries, where a large group of women are reluctant to take the Pap test for various reasons. As a result, it is

critical to understand the barriers to participation as well as the facilitators that may increase their willingness to participate.

The World Bank defines low-income economies as those with a Gross National Income (GNI) per capita, calculated using the World Bank Atlas method, of \$1,085 or less in 2021; lower middle-income economies as countries with a GNI per capita between \$1,086 and \$4,255; upper middle-income economies as the ones with a GNI per capita between \$4,256 and \$ 13,205; High-income economies as the ones with a GNI per capita of \$13,205 or more (5).

This review identifies the main barriers and facilitators to cervical cancer screening uptake among women in low and middle-income countries. It also highlights potential strategies for improving screening uptake and suggests directions for future research.

KNOWLEDGE OF CERVICAL CANCER AND SCREENING

Knowledge about cervical cancer and Pap tests is an important factor affecting screening participation among reproductive-aged women. Lack of knowledge about the Pap test procedure was a barrier among those who were irregular or never participated, while women who regularly participated in the screening had adequate knowledge about cervical cancer and Pap tests (6). This is consistent with many studies that found that knowledge of cervical cancer was significantly associated with screening service uptake (7–12).

Similarly, many studies conducted elsewhere have cited a lack of cervical cancer and screening knowledge as one of the major reasons for failing to participate in screening programmes (13,14). Due to a lack of knowledge, there were several misconceptions about cervical cancer and screening measures among Nepali women, which were reported as a barrier to screening uptake. Women who had previously participated in a community awareness campaign incorrectly felt that screening should be done every six months and that women should go to their local health centre for screening. Other women felt that if they got a negative test result, they would never “catch” cervical cancer (15).

Improved knowledge of cervical cancer and its screening would help to understand the benefits of screening. However, improved knowledge alone is unlikely to be sufficient. The following sections further discuss other barriers and facilitators to screening.

SOCIO-DEMOGRAPHIC FACTORS

In this review, higher screening rates proved to be closely linked to higher education levels and being employed. Performance of the Pap test was associated positively

with employment and high educational level among Brazilian and women in Dire Dawa, Eastern Ethiopia (11,16). Similarly, many studies showed that women who were employed and with a university degree ($p < 0.05$) had a high frequency of Pap test performance (17–19).

Women’s age is also one of the important factors that influence cervical screening uptake. A cross-sectional analysis involving 1483 women in Tanzania found that many women younger than 20 and older than 50 believed that cervical cancer screening was not required compared to the 20–49 age group (20). Among women aged 30 to 49 years in East Ethiopia, older women were likely to participate in care seeking behaviour than younger women (21).

Women with low monthly income had a considerably lower rate of cervical cancer screening. Several factors have been highlighted as barriers to using the programme among low-income women, including transportation costs, childcare costs, and frequent attendance at the subsequent follow-up appointment (13).

Differences in screening rates were noticed between urban and rural regions. Living in rural regions was associated with a low screening rate compared to living in urban regions as cited in several studies (13,22). This is most likely due to access limitations to these facilities. Extensive public health campaigning is needed within rural areas to increase cervical cancer screening uptake and decrease its mortality (23,24).

Whereas those who were married and had a high endeavour to get a Pap test were more likely to be screened (21,25). One explanation for that is most of the women who seek for family planning services in a clinic set up are married and the health personnel inform and screen them during family planning counselling for cervical cancer. Another explanation is that married women had more frequent sexual contact, may have more gynaecological problems, and may have used gynaecology services more often than unmarried women (26).

Thus, socio-demographic inequalities in the uptake of Pap tests pointed out that more financial support is necessary to promote screening programmes for cervical cancer and to have a system that secures access to healthcare equally.

PERSONAL AND BEHAVIOURAL FACTORS

Several personal and behavioural factors are thought to affect cervical cancer screening uptake. Individuals who consumed 5 portions of vegetables or fruit per day and exercised moderately were more likely to have a Pap test. Former smokers had higher screening rates compared with non-smokers. Those who were active

smokers were no more likely to attend than never smokers, despite their increased risk for cervical cancer (22).

Multiple sexual partners [AOR = 3.96 (95% CI; 1.48–10.58)] and a young age at first sex [AOR = 6.05 (95% CI; 1.167–31.36)] were other factors influencing cervical cancer screening uptake (9,27). A cross sectional study conducted among nurses in Taiwan showed that nurses who were sexually inexperienced were less likely to have had a pap test than those with sexual experience (25).

SOCIOCULTURAL FACTORS AND BELIEFS

Religious Factors and Cultural Beliefs

Although cultural values can be a deterrent to screening, it is also apparent that they can be a facilitator and can be affected by religion. A cross sectional survey was conducted in Taraba, North-East Nigeria among 978 women of child bearing age and found that knowledge and screening prevention practises were also significantly determined by religion, which is greatly influencing culture and belief ($p < 0.05$) (28).

Concerns about how screening was viewed by group members and family members were identified as a challenge in many studies. Stigmatizing beliefs about women having cervical cancer, such as “Women with cervical cancer give me a feeling of dirtiness” and “One should maintain a social distance from women who have been diagnosed with cervical cancer”, as well as agreement with the negative statements about cervical cancer screening, were more likely in Ghanaian women with lower levels of education (29).

Nepali women are expected to perform all home activities in accordance with social norms. As a result, the participants expressed a lack of personal time, including for health screening, which might take up a significant portion of the screening. They also believed that if they went to screening clinics, other members of the community would grow suspicious and gossip about them. Men-dominated cultures may limit women’s capacity to communicate and express their opinions, which may limit their ability to make decisions. So, their health may be ignored, and because women rely on their husbands or in-laws to make health decisions for them, they may be prohibited from attending a screening clinic (15).

Fear of Cervical Cancer Screening

Fear of the unexpected, as well as the risk of a cancer diagnosis or negative news, have been established as barriers to women undergoing cervical screening. One of the most reported challenges for attending screening was fear of screening results (13), and emotional costs, in the form of fear of the screening process and pain (20,30,31), or both of them (15,31–33).

Family and Social Support

Social support from family and women’s groups is critical in encouraging women to get screened for cervical cancer (33). Social participation was also one of the enabling factors linked with improvement in the awareness and participation of cancer screening (34). Regarding spouse support, men played a critical role in decreasing the burden of cervical cancer. Different forms of support could be provided by men- social, emotional, financial and material-to their partners during the screening and treatment stages of the disease. However, some of them prevented their partners from having screening and treatment for the disease. Some men would not hesitate to provide their partners with emotional, financial, and social support if their partners were diagnosed with cervical cancer. Others indicated a willingness to assist their partners but didn’t have knowledge of the disease (35).

Embarrassment

Many studies mentioned embarrassment as a barrier of non-participation in the screening as it is related to the intimate nature of pap tests (31) or feeling embarrassed in explaining the procedure to their family members (15,32).

So addressing culturally specific barriers may improve utilization of cervical screening among women. Moreover, it is necessary to ensure privacy and have female health care providers available at facilities to overcome embarrassment issues.

HEALTH SERVICE FACTORS

Healthcare system factors are considered one of the important barriers to cervical cancer screening. Identified barriers related to the health system include a lack of resources and health infrastructure within the overall health system and training among providers (32). Distance to the screening site was associated with higher non-adherence rates. A study that was done among Indonesian women found that a short distance to health services was one of the recognised enabling factors linked with more participation and greater awareness of cervical cancer screening (34).

Having health insurance is considered one of the enabling factors towards screening among Indonesian women (34). Perceived challenges for screening attendance include direct and indirect economic costs, such as lost income, transportation costs, and waiting time (33). Women in Murang’a County, Kenya, are unable to receive and utilise CCSS from public hospitals due to a heavy workload and a lack of provider-initiated counselling, which led to increased patient waiting time (21).

Motivation and education by healthcare workers about cervical cancer screening are important factors for

increasing screening rates (36). Recommendation and provision of standardised information on the test, as well as having female service providers, were recognised as facilitators of cervical screening (12). A study conducted in India reported that some participants had never been advised by their doctors about pap tests or that they themselves did not feel the need for any such test. 37% of the women believed that their doctors would prescribe a Pap test to them if they were in need of it (32).

In order to motivate screening, it is necessary to have a strong physician-patient partnership. Nurses with positive attitudes and experience with Pap tests can help persuade women to get them, thereby increasing screening uptake (25). As a result, it is critical to enhance health-care system factors in order to maximise screening and use of health-care services.

CONCLUSION

Evidence from a review of literature shows that cervical cancer screening services are underutilised in low and middle-income nations. Most barriers and facilitators to cervical screening are related to knowledge about cervical cancer and its screening, socio-demographic factors, personal and behavioural factors, cultural factors and beliefs, and health service factors.

Awareness programmes are needed to increase awareness about risk factors and to control shame and fear, with the terminal aim of decreasing the mortality rate of cervical cancer. Addressing the main sociocultural concerns is an important strategy for increasing acceptance and uptake of the screening procedure.

Culturally, proper approaches are needed to provide cervical screening practises and to improve cultural competence among health professionals in order to apply delivery models' services that value group cultures. Policymakers can improve screening uptake by identifying the obstacles to screening, ensuring health insurance coverage, strengthening the health system and delivering outreach services to the community in order to reach individuals who cannot afford to attend health institutions. Increased health staff should be employed to alleviate workload and to give provider-initiated counselling to assist women in confronting their worries over screening and treatment procedures.

So, understanding the barriers and facilitators can assist researchers and practitioners in developing evidence-based interventions and further research that will assist in decreasing cervical cancer mortality and morbidity.

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