



Regular Cervical Cancer Screening for Iranian Women: Facilitators and Barriers

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Abstract

Introduction: Regular cervical cancer screening is an effective strategy to reduce the incidence and mortality rate of this disease. Therefore, the present study aimed to explain facilitators and barriers to performing regular Pap smear tests in Iranian women.

Methods: This qualitative study was performed in 2017 in medical centers in Hamadan. The participants in this study were 23 women and 8 health care workers who were selected through purposive sampling. The inclusion criteria were the willingness to participate in the study and having the ability to communicate properly. The data were collected using in-depth semi-structured interviews and analyzed using the qualitative content analysis method with MAXQDA10 software.

Results: Three main concepts were recognized as facilitators and barriers to regular Pap smear testing: (1) Belief vs. disbelief in the possibility of cancer control and treatment, (2) Priority vs. non-priority of health in life, and (3) Ability vs. inability to overcome the challenges ahead.

Conclusion: Given the results of the study, it is necessary to establish policies to increase people's sensitivity to testing and the dominance of screening culture in society. Health officials also need to support training programs to promote women's understanding of the importance and impact of early diagnosis in controlling and treating cervical cancer and to develop and implement programs to reduce or eliminate financial, time, and emotional barriers.

Keywords: Cervical cancer, Regular screening, Pap smear test, Facilitators and barriers, Iran

Introduction

Cancer is the second leading cause of death worldwide. Approximately, 70% of cancer deaths occur in low- and middle-income countries (1). This rate is expected to increase due to population

growth and aging (2).

With about 528,000 new cases a year, cervical cancer is the fourth most common cancer in women. Deaths from this cancer account for 7.5% of deaths in women due to cancer (3). Cervical cancer is the most



common cause of death from cancer in 43 countries (2). The incidence of this cancer in Iran is 947 cases per year (4).

Cervical cancer affects the physical, mental, and social aspects of patients and their families (5,6). Women often go to clinics in advanced cases of the disease (7). Performing regular Pap smear tests is recommended for all women as a screening test to reduce the incidence of cervical cancer and its mortality rate (8). Evidence shows that in countries where screening programs are implemented extensively and regularly, the incidence and mortality of cervical cancer have decreased (9). In a study by Assoumou et al. in Central Africa, only 9% of women took the test more than 3 times (10). Besides, in their cross-sectional study in the United States, Kasting et al. found that only 14% of participants had taken the Pap smear test in the last 3 years (11).

The frequency of Pap smear is not desirable among Iranian women either. In Qom, 11% of women had regular Pap smear tests and 51% had irregular cervical cancer screening (12). In Asadabad, a city in Hamadan Province, only 10 percent of the 54 percent of women who had taken a Pap smear test repeated it at regular intervals (13). In Kaboudarahang, another city in Hamedan, 69% of the participants in the study had a history of irregular Pap smear tests (14).

Lack of knowledge and awareness and not understanding the role of screening in cancer prevention have been cited as the main barriers to cervical cancer screening in low- and middle-income countries (15).

Most studies have only looked at whether or not women have had this test. Given that regular Pap smear tests are important in early diagnosis and prevention of cancer and since no studies have focused on regular Pap smear testing, the present study aimed to explore facilitators and barriers to regular cervical cancer screening in women.

Methods

This qualitative study was conducted in 2017 in Hamadan (a city in western Iran), in which according to studies, the rate of regular Pap smear tests is not desirable (16). The participants in the study were 23 women (11 with a history of regular Pap smear testing, 7 with a history of irregular testing, and 5 without a history of Pap smear testing) and 8 health care workers (4 midwives, 1 gynecologist, 1 general practitioner, 1 pathologist, and 1 family health expert) who were selected using purposive sampling. One of the researchers visited the health centers and, after obtaining permission from the center's officials, invited people who met the inclusion criteria to participate in the study. The inclusion criteria were the willingness to participate in the study and having the ability to communicate properly. In addition to the above criteria, the additional requirement for health care providers was to have at least 1 year of work experience related to cervical cancer screening tests. The participants were told that their participation in the study was voluntary and that their information and names would be kept confidential. Besides, written and informed consent

was obtained from the participants, and the sampling process continued until the data were saturated.

The data were collected through in depth and semi-structured interviews (lasting 20-60 minutes). All interviews were recorded with the permission of the participants. Examples of interview questions about the participants' experience of taking Pap smear tests were as follows:

- What made you take a Pap smear test?
- What made you repeat the Pap smear test?
- What factors and events prevented you from repeating the test?
- What factors contributed to the delay in taking the test?
- Why haven't you taken the Pap smear test yet?

To collect data about the participants' characteristics, a demographic information form was used. The collected data were analyzed using Graneheim and Lundman's qualitative content analysis method (17). Initially, one of the researchers transcribed the interviews into written texts, and then the transcripts were analyzed and coded as a unit of analysis. Words, sentences, or paragraphs were considered as meaning units. Then, the meaning units were extracted and conceptualized into codes according to their underlying concepts. The identified codes were compared in terms of their similarities and differences and were classified under more abstract categories each with a specific label. Finally, by comparing the categories with

each other and contemplating on them, the contents hidden in the data were extracted as themes. Data analysis was performed simultaneously and continuously with data collection. The collected data were analyzed using MAXQDA10 software.

In this study, Lincoln and Guba's criteria (credibility, dependability, confirmability, and transferability) were used to increase the robustness of the data (18). To this end, a longer time was assigned to collecting and analyzing the data to better understand the related concepts, and the participants were selected with the maximum variation in terms of demographic and midwifery variables. Furthermore, a part of the manuscripts along with the extracted themes was provided to the participants to review them. The codes assigned to the themes were reviewed and modified by members of the research team and an external observer. The researchers also recorded all the procedures taken in this study in detail.

Results

The average age of women participating in the study was 37.76 (24-54) years and the average age of health care workers was 44.37 (34-54) years. Eleven women had an educational degree higher than the diploma, and 12 of them were employed. Three main themes were extracted from the data: 1) Belief vs. disbelief in the possibility of cancer control and treatment, (2) Priority vs. non-priority of health in life, and (3) Ability vs. inability to overcome the challenges ahead (Table 1).

Table 1. Themes, categories, and subcategories identified in the study

Subcategories	Categories	Themes
The availability of screening tests The effectiveness of screening tests	Belief in the importance of early detection of cancer	Belief vs. disbelief in the possibility of cancer control and treatment
The availability of treatment methods The effectiveness of treatment methods	Belief in the curability of cancer	
Special sensitivity to health Health as a requirement for the effective performance of roles Health as a requirement for a high-quality life	Essentiality of health	Priority vs. non-priority of health in life
Acquiring health knowledge Responding to health needs	Seeking health	
Financial barriers Emotional barriers Time barriers	Encountering barriers	Ability vs. inability to overcome the challenges ahead
Cost management Mental readiness Time management	Overcoming challenges ahead	

Theme 1: Belief vs. disbelief in the possibility of cancer control and treatment

The results of the study suggested that the belief in whether cancer can be managed and controlled plays an important role in cervical cancer screening tests. The women who had regularly taken the Pap smear test believed that cancer was preventable and treatable. However, most people who had not taken the test, or those who had taken it irregularly believed that having or not having cancer was their destiny and did not need to be diagnosed early because they believed that cancer was an incurable disease. Therefore, they were reluctant to be informed of their condition or health through testing, preferring to be unaware of it even if they had the disease. For example, one of the women who did the Pap smear test irregularly stated,

“The things I read made me go and do the test, but the things I saw made me completely give it up. Two of my loved ones died of cancer and I saw that they were doing medical check-ups regularly

before developing the disease. I think it’s useless to spend all this money. It’s all in vain. God forbid, if you have malignant cancer you won’t find any treatment for it. Even people with benign cancer would live for 5 to 6 years at most” (Participant 21, a 35-year old housewife, high school diploma).

In contrast, one of the participants who performed the test regularly stated,

“You often hear that when there is a problem, it will be better to be treated sooner. If cancer is diagnosed early it’s much easier to treat it than when you are not aware of it. Maybe it encourages me to go and do the necessary check-ups. So if there is a problem I can start the treatment process sooner” (Participant 10, a 32-year-old teacher, bachelor's degree).

According to the above statements, the participants’ prior knowledge and their positive and negative experiences played an important role in shaping their beliefs, and the belief in the effectiveness of Pap smear test and cancer treatment affected

their performance.

Theme 2: Priority vs. non-priority of health in life

The participants who performed the Pap smear test regularly were very sensitive to their health and paid close attention to it. One of the main reasons for their special attention to health was that they strongly believed that to take on social roles, such as being a mother, being a wife, etc., they must be healthy in the first place. They believed that diseases and their consequences could affect the individual and others and could reduce their quality of life. They also suggested that they should be diligent in maintaining their health and always strive to maintain it. Trying to gain health knowledge, responding to one's health needs by visiting private or public health centers, complying with health instructions, not neglecting health issues, and taking basic health measures to prevent diseases or prevent the progression of the diseases were some of the actions taken by the participants. One participant who performed the Pap smear test irregularly stated,

“We do not care about our own health; maybe if something happened to my child, I would do something immediately to treat him/her. But I don't care about myself at all. The fact is that we don't believe in valuing ourselves. We don't care about our own health” (Participant 17, a 41-year-old nurse, bachelor of nursing).

On the other hand, one of the participants who performed the test regularly stated, *“I do the test for my own health. I think I can take better care of my children if I'm healthy. Well, I'd be a better mother and can better care of my husband”* (Participant 5, a 38-year-old housewife, bachelor's degree in accounting).

Although the two participants mentioned above paid special attention to their family roles, they each took a different approach to performing their roles. In contrast to people who do not take the test or do it irregularly, people who take the test regularly attach importance to their health so that they can perform their social roles more efficiently.

Theme 3: Ability vs. inability to overcome the challenges ahead

Time constraints and financial and emotional barriers were the most important barriers to regular screening tests as was stated by participants. Waiting at the health center for testing, the time-consuming process of the test and its interpretation, the opening of health centers only in the morning shifts when working people could not go there, and a busy life were some of the barriers to taking the Pap smear test. The financial inability to pay for the test and the cost of interpreting the test, as well as the feeling of disgust at the test due to embarrassment or fear of a vaginal examination, were some financial, time, and emotional barriers to performing the test stated by the participants. Emotional support from health care providers, as well as the advice and insistence of others such as family members, friends, and peers, were effective factors in overcoming emotional barriers such as fear and embarrassment. Performing the Pap smear test in public health centers and having health insurance were important factors in overcoming financial barriers. Factors such as taking several care measures at the same time, easy access to health centers, and the ability to perform the entire process in a single place were effective in overcoming time constraints. One participant who had not yet taken the test said,

"I don't feel like doing the test, I don't like it, I have a disgusting feeling when I lie on the bed. I don't like the devices they put in my body. I don't feel good about the examination at all" (Participant 13, a 24-year-old housewife, bachelor's degree in agriculture).

On the other hand, one of the women who performed the test regularly stated the following about overcoming challenges, *"I have no problem with the test costs. Well, my supplementary insurance will solve it. Well, despite the temporary challenges such as cost and time, I prefer to be strict on myself and do the necessary check-ups so that I won't worry about anything"* (Participant 10, a 32-year-old teacher, bachelor's degree in geology).

As the findings of this study suggested, the women who were able to perform the test regularly overcame these challenges by managing costs and time and being mentally prepared.

Discussion

The results of this study showed that women who had performed Pap smear tests regularly believed that cancer is a controllable disease and that Pap smear is a valuable and reliable test. Similarly, Perng et al. showed that women who have a positive attitude towards Pap smear tests are more likely to take the test (19). A study by Scott showed that women's attitudes toward testing, as a preventative health measure, significantly predicted participation in screening programs (20). The present study found that believing in the uncontrollability of cancer and believing in the inability to get along with the diagnosis of cancer were important

factors in ignoring the diagnosis and testing. In their study, Tay et al. emphasized the effectiveness of belief in the controllability of cancer and suggested that the most important factor in conducting regular testing in their study was the belief in reducing the risk of cervical cancer by screening (21). Martínez-Donate et al. found that fear of disease detection and fatalism were effective barriers to screening behavior (22). In a similar vein, Padela et al. found that people who believed that the development of a disease was a punishment from God performed the tests less frequently (23). William et al. revealed that anxiety caused by the stigmatization of a woman with cancer by her husband or the surrounding community is effective on Ghanaian women's refusal to perform diagnosis tests (24). In the present study, some women tended to be unaware of the disease as they believed in the uncontrollability of the disease and the inability to cope with it. However, William et al. showed that women's tendency to remain unaware of the disease was due to the fear of public reactions.

The results of the present study suggested that living a healthy life was one of the main concerns of those who took the Pap smear test regularly. Hasahya et al. considered health needs, health decision-making processes, concerns, and local conditions as the main keys to health-seeking behavior (25). Fallahi et al. stated that creating a positive attitude towards health is one of the factors affecting the performance of Pap smear tests (26). The present study showed that attaching significance to health and valuing it contributed to engaging in health behavior, and the women who had the experience of medical screening and consultation with a

specialist or gynecologist were more likely to engage in screening behaviors. Olesen et al. and Labeit and Peinemann showed that people who were more concerned about health care and tended to regularly refer to gynecologists and consult with them were more likely to follow the cervical cancer screening program (27,28). Sharifi et al. also stated that the higher rate of Pap smear testing in younger women was because most of them refer to comprehensive health centers to receive maternal and child services (13). Refaei et al. stated that the use of strategies that focus on messages that increase individual responsibility for health would be effective in performing Pap smear tests (29). The present study showed that people who took the Pap smear test regularly were more likely to seek health knowledge through various means such as searching the Internet, asking health care providers, watching health-related television programs, etc. Shneyderman et al. concluded that people who more frequently seek health information and information about cancer are more likely to participate in screening programs (30).

From the perspective of most participants in this study, providing facilities such as reducing the cost of screening or facilitating the screening process by a center can have a positive effect on the screening program. Minimizing the cost of doing Pap smear tests is useful for all groups of women (31). Poverty and financial difficulties are barriers to Pap smear tests, delays in doing tests, or follow-up treatment (32,33). Reducing the cost of services provided could affect screening (19). Supporting low-cost service organizations and programs is an effective factor in screening programs (34). Akinyemiju reported that government spending on health services is directly

related to the increased frequency of screening (35). The health system must allocate sufficient funds for cervical cancer screening, and budget allocation affects all functions (36). McCree et al. found the lack of funding and human resources as barriers to doing Pap smear tests, stating that resource allocation and capacity building are key elements for the success of screening programs (37).

The lack of time, job responsibilities, and child care are barriers to doing Pap smear tests by women (21,38,39). Sharifi et al. stated that the lack of time to perform tests and the fear of a positive test result were some challenges of doing Pap smear tests. The reason for the decrease in frequencies of screening followed by the increase in the number of pregnancies and deliveries can be due to the mother's conflict with the children, the lack of time to go for screening, and the reduction of the family's financial capacity (13).

The present study showed that the negative feeling associated with the medical examination was another deterrent to doing Pap smear tests. This negative feeling is greatly influenced by the culture of the community (40). Male sex of physicians is a barrier to doing Pap smear tests (24,39). In Iran, the test is often performed by female health care providers, but women still are embarrassed about taking the test. Therefore, health care providers' attempts to normalize this test can contribute to overcoming this barrier. The present study indicated that the psychological and emotional support of health care providers was a factor influencing emotional barriers. Health care providers play an important role in motivating women to have screening and this supporting role can be used in screening interventions (29).

The findings of the present study suggested that women go to the clinic with their husbands to receive child services, but they are not willing to take the time to perform the Pap smear test. Insufficient information of men about the test was expressed as an influential factor. The present study underlined the importance of public awareness in addition to women's awareness of the benefits of the test. Gan and Dahlui considered social support for women as an effective factor in encouraging women to perform the test and noted that to improve screening behavior, raising awareness of men is essential (41).

One of the strengths of this study was the use of qualitative methods for data collection and analysis and sampling variation since, with this method, it is possible to better examine complex behaviors that are affected by various factors. One of the limitations of this study, which is typical of qualitative studies, is the partial generalizability of findings. To this end, the researchers tried to eliminate this limitation to some extent based on theoretical sampling, by observing variation in terms of age, education, employment, number of children, and menopausal status.

Conclusion

To improve regular cervical cancer screening

as a health behavior in society and make training programs more effective, it is important to emphasize the significance and effectiveness of early diagnosis of cervical cancer and especially its effective treatment. Besides, to promote the culture of screening in society, in addition to public training and awareness-raising programs, women should be always encouraged to do Pap smear test regularly. Moreover, efforts to motivate women and normalize this test for them by health care providers are key elements for the success of screening programs.

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Conflict of Interest

There is no conflict of interest in this study.

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