Barriers and Facilitating Factors for Cervical Cancer Screening: a Qualitative Study from Iran

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Abstract

Background: This study aimed to explore the experiences of Iranian women regarding the barriers to and facilitating factors for cervical cancer screening.

Methods: Eight focus groups (N= 86 participants) were conducted with women referred to a health center in Karaj, Iran from January to March, 2007. Purposeful sampling was used. Married women aged 18 years old and over, not suffering from Obstetrics/ Gynecological disease during last two years and being willing to participate in the study were included. Framework analysis was used to extract the themes from the data.

Results: In general, the participants stated that they were not knowledgeable regarding cervical cancer. Moreover, most of the participants had negative beliefs regarding cancer prevention, including lack of free time to do the test, cost of the test, no symptoms cue. The perceived facilitating factors verified by the participants were cues to action, health care motivator, and perceived threat.

Conclusion: The findings of this study revealed that there are various psychosocial barriers to cervical cancer screening among Iranian women. High accessibility and availably of the test as well as health care providers' encouragements may improve the rate of cervical cancer screening.

Keywords: Cervical cancer; Pap smear; Screening; Practice

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Introduction

Despite cervical cancer is among few preventable cancers [1], yet it is a major health problem in developing countries [2]. Nearly, 500,000 new cases of cervical cancer and 280,000 death due to this kind of cancer have been reported in 2006 [2]. Studies showed that the majority of cervical cancer as well as the most deaths due to this disease occur in low and medium income countries. It has been argued that cervical cancer causes 2.4 million Years of Life Lost (YLL) among women aged between 25 – 65 years [3].

According to Iran Cancer Institute report in 2006, the Iranian cervical cancer prevalence rate has been estimated 6-7 per 100,000 [4]. This report revealed that the incidence of cervical cancer has been increased among younger women in recent years [4]. The mortality rate of this cancer in a research done in four provinces of Iran in 1999 was 1.2 over 100,000 females from all ages, causing it to be the ninth mortal cancer in women [5]. In another research done in Iran (2003), cervical cancer's crude rate was 2.34% [5].

The survival rate of cervical cancer is directly related to the stage of diagnosis. Previous studies revealed that the survival rate of individuals with cervical cancer which has been diagnosed in the stage of insitu carcinoma, has not decreased [6]. Moreover, the patients who have been early diagnosed had survival rate much more than who suffering metastatic disease means 91% versus 14% [7].

Papanicolaou or Pap smear test is an easy and powerful cervical cytology screening test that could detect cervical cancer in premalignant stage that would be curable [8]. In developed countries, the decline in cervical cancer incidence and mortality has been resulted in extensive screening program. In contrast, in most developing countries, comprehensive cervical cancer screening are rare [1].

Current screening programs in developing countries faced obstacles such as inefficient supplies; inadequate trained health care providers, limited

available services and lake of patient follow up. Additionally, lack of appropriate programs in these countries indicates that the population may be at relatively high risk for cancer mortality and morbidity due to delayed diagnosis [1, 9]. Inappropriate allocation of funds and human resources could be a barrier to an effective and organized screening program [9]. In some cases, lack of enough knowledge regarding preventable cervical cancer and also socio-cultural barriers such as embarrassment for pelvic examination, may lead to lack of using available screening services [10]. In other words, previous studies showed that individuals' beliefs about the causes and significance of a particular illness are interconnected with their healthcare seeking behaviors [11].

Various lists of barriers and facilitators to cervical cancer screening are identified in some research studies. Cultural differences could limit generalization of these determinants. Although cervical cancer is of high concern in Iran, and the level of screening test is unacceptable, few studies have been carried out to reflect the experiences and perceptions of patients on the barriers and motivators to care in Iran. The aim of this qualitative study was to gain a culturally based understanding of cervical cancer screening in Tehran by identifying personal and environmental factors influencing cervical cancer screening of women.

Materials and Methods

Eight focus groups, each composed of 8-12 women referring to the health care centers of Karaj for a medical visit or their child's vaccination, were conducted at the clinics in Iran. Each focus group met for 1.5 to 2.0 hours. Purposive sampling using the maximum variation strategy [12] was applied in an attempt to tap known variables associated with cervical cancer screening, such as age and education. Inclusion criteria were based on predetermined characteristics: married women, 18 years old and over, not suffering from Obstetrics/ Gynecological disease in two past years, being satisfied to participate in the study, and fluent in Farsi. The participants were firstly invited to the groups and then the objectives of the study were explained to them. Participants (N = 86) read and then signed the informed consent forms. The focus group discussions were taped recorded and then transcribed verbatim in Farsi. Subsequently the transcripts were translated into English by the lead author.

Trustworthiness, and particular credibility, was addressed by the all followings: a sample size offering a rich data set; the same moderator for all focuses group discussions; and collaborative data analysis. To conduct the focus group, a moderator's guideline, which consisted of general and specific questions based on the Health Belief Model and relevant literature, supplemented by probes, was used. These questions were formulated based on the literature and in consultation with specialists who were involved in cervical cancer screening. The moderator managed each session and an assistant took notes that contributed to the data analysis.

The approach was used to elicit the women's subjective perceptions of cervical cancer without the investigators' interpretation or conceptualization of the data. First, the researchers explored the women's perspectives regarding cervical cancer in terms of its etiology, clinical symptom and its preventive practices. Secondly, they obtained the perspectives of participants regarding the barriers to and facilitating factors for doing Pap smear test as a diagnosis approach for cervical cancer.

A guide questionnaire was constructed [13] to serve as a guideline for the discussions. A consultant who was an expert in qualitative research validated the guideline questions. With the permission of the participants, interviews were taped and transcribed onto computer disks. The accuracy of the transcriptions was checked by the leading author. At the end of the discussion, participants were asked to complete a socio-demographic questionnaire. The focus group discussion session commenced with an introduction and general outline of the interview questions. First each woman was asked to present her story regarding cervical cancer screening in 3 minutes, then the lead author posed questions to the group as a whole, although individual involvement and participant interaction were encouraged. Last, a question-and-answer session was held on about 30 minutes.

We used the 'framework' method for the analysis [14]. We developed an initial thematic framework based on interviews, prior thoughts and literature. The transcribed data were reviewed and analyzed independently by the researchers. We used the Health Belief Model (HBM) deductively in the process [15]. The data were coded using standard, descriptive, qualitative content analysis [16]. The primary author first analyzed the data by identifying and categorizing codes for participants' responses to each question. Then the secondary author independently assigned codes to participants' responses. The two authors' codes were compared to assess reliability. In areas where the two authors did not agree, definitions were clarified, and discussions

continued until consensus was reached. The thematic framework was updated in the process of the analysis [14]. The initial framework contained six themes which were reduced to three as the analysis developed. The process of refining the themes followed a non-strict adoption of the grounded theory [17]. We prioritized data over theory and literature in the analysis (inductive approach) [18].

To answer the research questions, the data were finally clustered according two categories: 1) Barriers to (lack of knowledge about cervical cancer, negative attitude regarding cervical cancer prevention) and; 2) Facilitating factors for doing screening test.

Results

A total of 86 participants took part in the study. They ranged in age from 19 to 42 years, with an average age of 29. A summary of participants' demographic characteristics is shown in Table 1.

The participants spoke regarding the factors related to cervical cancer prevention within the context of their lives. The themes explained the influencing factors in doing Papa Nicola test (Pap smear) as the best approach for preventing cervical cancer (Table 2).

Barriers to cervical cancer screening test:

Perceived lack of knowledge

In general, the participants stated that they lacked knowledge about the causes, symptoms and prevention practices about cervical cancer. Their source of information was their own observed cases of illness, or what they had heard about the cancer from their friends, and relatives. As they own mentioned that they suffer from little information, researchers asked them to articulate their knowledge regarding causes of cervical cancer, symptoms of the disease, and cancer prevention approaches.

About half of participants believed that just lack of family history of cervical cancer is enough to be safe regarding this disease. So, these women rejected doing pap smear test as a preventive approach of cancer. One woman said, 'I don't think I ever get cancer. I am confident that I am not susceptible to this disease, because there is no history of cancer in my family, I am safe'. Then the participants spoke about unhealthy life style that could lead to cervical cancer. The majority of the participants voiced that fast food or foods with chemical supplement can cause all kinds of cancers, including cervical cancer. One participant stated, 'Nowadays, eating chemical foods causes kinds of cancer'. Some women believed that air pollution as well as passive smoking due to smoker husbands could cause cancer. One woman observed, 'In the past, we didn't hear this much about cancer. But now we hear so many people have cancer. I think polluted air is a cause'. Many women believed that stress could cause cancer. They confirmed modernized life style increased stress that subsequently resulted in cancer. One woman said, 'When I was a child, I seldom heard about cancer. In past we lived peacefully'. Women commonly talked about higher risk of getting cancer due to unhealthy physical conditions. Some of the participants believed that poor physical health might be related to cervical cancer. Three older women also mentioned menopause as a cause of cervical cancer. Some women thought that irregular menstrual bleeding leading to cervical cancer. One woman said, 'I think women have to be cautious about irregular bleeding, as I have heard it causes cancer'.

The participants were also asked to articulate their knowledge regarding the symptoms of cervical cancer that may make them do Pap smear. The most prevalent symptoms that mentioned by the majority of participants were pelvic pain and menstrual bleeding. The other symptoms stated by some women were low back pain and weight loss. One participant revealed, 'As I know, it has some symptoms such as pain. Cancerous patients suffer from severe pains'. Another one added, 'You mentioned bleeding as a cause, but as far as I know bleeding is the result of cancer. It may be because of a lump'.

Cancer prevention approaches were discussed in the focus groups either. Most of the studied women believed that the cancer is not preventable. However, some women believed that having a healthy lifestyle (not having stress, staying healthy and proper diet) will prevent them to get cancer. One woman said: 'Living peacefully and without stress protects people from any kind of disease; but living without stress is impossible (laughing) '. Some women believed that cancer is due to god's willing and women should ask god to make them healthy. One woman said, 'God is beneficent and merciful, so if we ask him to give us healthy life, he will give and draw our destinies'. Many women believed that eating healthy food would keep them away from cancer. They also verified that eating traditional food would keep them safe because it has less chemicals and preservatives.

Lack of perceived positive beliefs about Pap smear

There were some perceived negative attitudes regarding Pap smear test among participants. The majority of participants stated that to do Pap smear for cancer recognition cause some fears that resulted

Table 1. Socio-demographic characteristics of sample of Karaj women (N = 86)

Characteristic	N	%
Education (years)		
1– 6	14	16.2
7–12	65	75.6
13 and over	7	8.2
Marital status		
Married	80	93
Widowed	6	7
Divorced	0	0
Employed		
Yes	11	12.7
No	75	87.3
Insurance		
Yes	81	94.2
No	5	5.8
Pap test done in the prior three years		
Yes	12	13.9
No	74	86.1

Table 2. Perceived lack of themes explaining the barriers to and facilitating factors regarding doing Pap smear

Categories	Themes	Sub-themes
Barriers	Perceived lake of knowledge	The causes of cervical cancer
		The symptom of cervical cancer
		The prevention approach of cervical cancer
	Perceived negative beliefs toward cancer prevention	Fear of doing Pap smear test
		Cancer is not preventable
		Pap smear test is time-consuming
		Pap smear test is expensive
		Pap smear test is painful
Facilitating Factors	Cues to action	Advices by health care providers or relatives
	Perceived threat	Perception of being susceptible to the cancer
		Observing death resulted from cancer
	Care system motivator	Availability and accessibility of the test

in rejecting this test. One woman said: 'I am frightened of test because it recognizes my cervical cancer so I refuse to do Pap smear'.

Most participants believed that doing Pap smear test takes much time and so they could not do it regularly. One woman said, 'When we wake up in the morning we have a lot of work to do; cooking, washing, caring children. We have no time to spend a whole morning for the test'.

More than half of participants verified that getting cancer is a kind of god's willing and so efforts to prevent it are not effective. Here is one statement, 'All is in God's hands. We cannot change our destinies, however we have to care ourselves'.

There were some other negative attitudes regarding Pap smear among participants. The majority of participants stated doing Pap smear is expensive and painful. One participant said: 'Life expenditures are too high to pay for a preventing test". Another one added: "I had the test once, but I did not repeat it because it was so painful'. Some women voiced about their embarrassment due to pelvic examination for doing Pap smear.

Facilitating factors for Pap smear:

Cues to Action

Some of the women in the focus groups had usually undergone a Pap test during the past three years. Health care providers' encouragement for doing Pap test was a kind of facilitating factor. Most of the participants that underwent Pop test cited that the recommendation by their physician or

health care providers has encouraged them to do test. Some women said that they have undergone the test based on recommendations by their relatives and friends.

Perceived threats

Another perceived motivating factors stated by the participants was their understanding that they were susceptible to the cancer, and observing death resulted from cancer in one of their relatives/ friend. A woman stated, 'I went for a test, because my doctor explained it for me and said that I have to do the test every 3 years'.

Care system motivator

The participants who underwent a Pap test stated that they had available and accessible health centers for undergoing Pap test.

Discussion

In this qualitative study we explored the experiences of Iranian women regarding the barriers to and facilitating factors for cervical cancer screening. Through focus groups discussions, we found two main barriers. Motivators included health care providers' encouragement for doing Pap test, relatives' and friends' recommendations, availability of the test at a near health center, their understanding that they were susceptible to the cancer. In our study, the many barriers were similar to barriers of other studies around the world. However, approaches to overcome even these common barriers must be grounded in the culture of patients.

Some women in this study believed that just family history could be a predisposing factor for cervical cancer. This belief misleads them to undergoing screening test, because they thought without this history made them safe. In addition, most of the women believed that they were safe against cervical cancer because of healthy diet and proper hygiene. This causation belief made them not seeking screening test. The findings are consistent with the literature. According to a study conducted by Lee et al., (2007) regarding Korean American women's perceptions on utilization of screening services, it was reported that lack of knowledge or misunderstanding about cervical cancer screening causes low utilization of these services [19].

Some factors that participants revealed as the causes of cervical cancer were not categorized as controllable behaviors. For example they believed that chemical materials supplemented to food or air pollution and daily life stressors cause the disease. So, the prevention of the cancer is beyond their control. An important belief of the women was about god's will, faith, and destiny as a causation belief of the disease. Ashing et al., (2003), identified Asians' belief that suffering from cancer is a kind of God's will and that just God could control the illness [20]. Baron-Epal et al., (2004) also reported that Arab Israeli, Indian, and Jordanian women tend to believe that everything comes from God, which leading to not undergoing screening test for cancer prevention [21].

There were some misunderstandings in Karaj women's perceptions on physical conditions that cause the cancer. Some of them believed that bleeding, infertility, cysts or tumor in the uterus, and hormone therapy causes cancer. As the most cited source of information mentioned by the women were their friends and relatives, it seems designing appropriate programs and presenting accurate information for these women is necessary. In the study conducted by Lee et al., (2000), they reported that some women were unable to proceed with preventive behaviors because of confusion and embarrassment [13]. This embarrassment is specially because of exposing one's body to male health care providers [13]. In present research, women did not mention embarrassment, because of a strategic rule in Islamic Republic of Iran that female patients are examined mainly by female health care providers. However there were some points of view regarding this kind of embarrassment among some participants in our study.

The participant correctly stated that bleeding from the vagina, pelvic pain, and lower back pain were the signs and symptoms of the condition. In the Lee's study, the women most often recognized the late symptoms of cervical cancer; however, some women cited some misinformation such as blood in the urine (sign of cystitis) as a symptom of cervical cancer [13].

In our study, most of the women believed that the cancer is not preventable. This perception or beliefs that cervical cancer is just due to destiny and God's willing prevent them to seek healthy behaviors like preventive screening test. However, some women believed in some controllable behaviors such as healthy lifestyle. Generally they had an accurate notion about factors related to good health. For example they believed, healthy lifestyle and regular check-ups were important for prevention. In spite of this belief, this knowledge did not lead to acceptable screening test for cervical cancer.

Most of the women in this study mentioned that fear of cancer diagnosis is a barrier to having test. Peters et al., (1989) found that psychological

barriers were greater negative predictors than socioeconomic barriers to screening test for cervical cancer [22]. Lee et al., also reported that psychological barriers such as fears and embarrassment were found to be very important for Korean-American women [13].

The second important barrier was lack of time. This stated barrier showed that benefits of the screening are not recognized well by these women; therefore lack of time became an important barrier to this preventive approach.

Along with the importance of perceived psychological barriers, the women expressed even more concerns about cost or lack of insurance services for the test, which were the main structural barriers to undergoing a Pap smear. Therefore, the benefits of the screening test should be highlighted in educational programs. The most cited perceived motivating factor mentioned by the participants was their health providers' advice. In this regard, medical providers' responsibility to inform clients regarding the screening test is recommended.

This study showed that different barriers may state by different individuals who are from different socio-cultural characteristics. Lee et al., suggested that if there was different barriers among members of varied groups, then the educational materials should be culturally sensitive and addresses issues of particular concern to specific groups [13]. Health education programs for specific ethnic groups should be based on need assessment in terms of the meaning of health and illness among target population.

Finally, motivational factors should be noticed. However, these factors are mostly culturally-oriented; there are few studies that explore them. Identifying these factors and working on them will help the planners to design more effective programs.

This study used the advantages of the focus groups; i.e. the sessions were flexible, stimulating, elaborative, assistive in information recall, and capable of producing rich data. The study, however, had some limitations. The study was carried out with women who had sought care in health clinics and it might not be representative of the general population of the women. Also, we did not measure the prevalence of screening test in our informants and all information we received was self-report of the women. A final limitation was that some participants might have responded with statements they thought were consistent with social standards. This social desirability bias might cause patients did not give us their own views, especially when in a group setting.

The findings of this study revealed that there are various psychosocial barriers to cervical cancer screening among Iranian women. According to this study a comprehensive educational materials should be provided for women, in order to increase their knowledge regarding the causes of cervical cancer and the benefits of screening test. In addition, the cervical cancer screening test should be available and accessible and also covered by insurance services in order to face its limitations including its cost and time presuming.

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Conflict of Interest

None

Authors' Contribution

FA contributed to the literature review and writing-up process. ESH designed the study, analyzed the data and wrote the paper. AP and ST contributed to the study design and analysis. All authors read and approved the final manuscript.

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