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Socio-Culturally Informed Views Influencing Iranian Adults' Decision About Colorectal Cancer Screening: A Qualitative Study

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Abstract

Background: Colorectal cancer (CRC) is one of the causes of death in the world and Iran. Screening reduces the risk of CRC mortality. The rate of CRC screening is low among Iranian adults.
Objectives: The aim of this study was to identify factors influencing Iranian adults' decision about CRC screening.
Methods: This qualitative study was conducted in Hamadan, Iran, between January and April 2015. The data were collected through 10 focus group discussions with 61 people, who had not undergone screening tests. The purposive sampling method was used in this study. We audiotaped and transcribed the interviews and extracted major themes from the data.
Results: The mean age of the participants was 54.92 $\pm$ 8.21 years old. We identified 6 themes across the focus groups, including 1, awareness and knowledge; 2, financial problems; 3, low priority of health concerns; 4, fear of detection of cancer; 5, problems related to the nature of CRC screening tests; and 6, mistrust in the health care system.
Conclusions: The findings of this study provide insight into the factors influencing CRC screening among Iranian adults and can help policy makers and health planners in designing effective interventions for increasing CRC screening rates.

Keywords: Colorectal Cancer Screening, Qualitative Study, Iran

1. Background

Colorectal cancer (CRC) is the third most common cancer in men and the second in women worldwide (1). In the Islamic Republic of Iran, CRC is also the fifth cancer among men and the third cancer among women (2). Through a meta-analysis of 39 studies from different provinces and diverse areas of Iran, Rezaianzadeh et al. showed a slightly increasing trend in recent years for CRC in Iran (3). Burden of CRC disease can be decreased by screening (4).

In Iran, although a comprehensive national cancer control program (CNCCP) was designed (5) and was approved by managers council in the ministry of health (MOH) in 2007, there is no organized nationwide program for the screening of common cancers, including CRC. Indeed, individuals are offered screening on an ad-hoc basis during physician visit. Regular screening for CRC is recommended, starting at age 50 years for adults at average-risk (6, 7). However, based on the epidemiological information, the implementation of screening programs may differ from one country to the next (8). Therefore, considering that the distribution of CRC has shifted towards lower age groups compared to developed countries (9, 10), starting regular screening in lower ages is a more conservative approach in Iran. Because of the distribution of CRC in lower age groups and demographic status, Iran may benefit even more from increasing the rates of CRC screening as a national priority.

Several different screening modalities have been introduced, including Fecal Occult Blood Testing (FOBT), flexible sigmoidoscopy, colonoscopy, and barium enema (6, 7).

The reported rate of participation in the CRC screening program in western countries is different; for example, 60.8% of American adults aged $\geq$ 50 years report recent CRC screening (11). In Australia, 36% of people aged over 50 years had ever undertaken CRC testing (12). In Iran, the uptake of CRC screening is low. A cross sectional study showed that 11% of the participants reported prior screening by either FOBT (6.5%) or colonoscopy (4.5%) (13).

Quantitative and qualitative studies have explored bar-

riers to CRC screening. Although findings of these studies would be useful, the vast majority of literature comes from western societies, where culturally informed views on cancer are different from developing countries. Moreover, there has been little research in countries such Iran, where CRC screening in not organized. Interestingly, there is no qualitative information on factors associated with CRC screening among Iranian population.

In the present study, the qualitative method was used to generate in-depth understanding of factors influencing CRC screening tests among Iranian adults. Qualitative designs are best suited to answer questions that little are known on the topic of interest (14). This method provides participants opportunity to express the experiences and perspectives that might be left underdeveloped in a quantitative method.

2. Methods

2.1. Study Design and Setting

This study consisted of 10 focus group discussions (FGDs) to identify the viewpoints of people, who had not undergone screening tests. Data collection was conducted between January and April 2015 in Hamadan, the capital of Hamadan province in the western part of Iran. In 2016, the population of this province was about 173,823 4 people (15). According to a recent study, the most towns of Hamadan province were placed in the developed region (16); however, this province has a lower literacy rate than the national average (17). In Hamadan province, based on the report of cancer institute of Iran (2009), age standardized incidence rates of CRC in males and females were 9.80 and 9.56 cases per 100,000 people, respectively (2).

In this qualitative study, participants were recruited from various community organizations in Hamadan, such as the retirement centers, mosque, Basij clubs responding to an invitation sent to the organization. In each organization, the purposive sampling method was used, looking for maximum variation sampling based on age, level of education, social and economic status, and occupation. Then, the participants contacted with the research team. To determine potential participants' eligibility, they were screened by a brief in-person interview.

The inclusion criteria for participants in FGDs included speaking Persian, being older than 40 years, and living in Hamadan. All adults who were recruited to participate in the study agreed, and none withdrew their participation after inclusion. To consider the cultural issues, we were held separately FGDs in male and female participants (5 FGDs among men and 5 FGDs among women). The FGDs were held at retirement centers and cultural/social centers in a private place and in a conversational manner. Two FGDs were conducted at university as a suitable venue could not be arranged. Participants offered drinks and snacks to thank them for their participation. A total of 61 respondents participated in FGDs. Each FGD had 5 to 7 participants and lasted between 60 to 90 minutes. All 10 FGDs were conducted in Persian language. The FGDs were facilitated by an open-ended guide, developed by research team, focusing on key points mentioned in the previous studies (18-20). The questions were piloted through one FGD with people who had not participated in the main study. The first author moderated all interviews with assistance from a research team member (F.B). At the beginning of each FGD, the moderator informed participants that the goal of the study was to learn about their barriers that might exist to CRC screening. None of the researchers had any relationship with the study participants before the start of the study. Participants were encouraged to contribute in discussions and to share any experiences about CRC screening.

2.2. Data Analysis

All of the FGDs were audiotaped and transcribed verbatim, and were coded and managed, using MAQDA10 software, a qualitative data management program. Content analysis was used to examine the participants' perceptions of facilitators and barriers to uptake of CRC screening. This method involves the open coding of text transcribed from FGDs, the grouping of codes into categories, and the generation of themes that represent the content of each of the categories (21). To enhance validity, 2 of the researchers separately read and coded the transcripts of FGDs and during several meetings, developing frame was reviewed and discrepancies in coding were discussed. Any disagreements between 2 researchers were resolved by the third researcher. Data collection and analysis were held until no new themes emerged (the point of saturation).

2.3. Trustworthiness

Peer reviewing and member checks were conducted to increase the trustworthiness of categorizations and interpretations. In peer reviewing, the second author assessed the FGDs transcripts and summary of the results, which resulted in some modification of categorizations of identified codes. Also, some of the FGDs participants were asked to participate in member checks. They examined the accuracy of our interpretations. This process identified the analysis as being accurate based on field data.

2.4. Ethical Issues

Ethical approval for this study was provided by ethics committee of Hamadan University of Medical Sciences

whit code p/16/35/9/6385. The aims of the study were communicated orally to all participants. The participants were ensured regarding anonymity and confidentiality of their information (22).

3. Results

3.1. Participants

A total of 31 men and 30 women participated in this study. The mean (SD) age of participants was 54.92 (8.21) years, reflecting the target age group for CRC screening. The majority of participants (96.7%) were married, and most of them (72.1%) had completed at least 12 years of formal education.

3.2. Themes Identified Through the Focus Group

We identified 6 themes across the focus groups, including 1, awareness and knowledge; 2, financial problems; 3, low priority of health concerns; 4, fear of detection of cancer; 5, problems related to nature of CRC screening tests; and 6, mistrust in the health care system. We will now discuss those in turn.

3.3. Awareness and Knowledge

Few participants appeared to understand the causes, symptoms, and screening methods of CRC.

The majority of the participants were not able to note some of the symptoms of CRC and most of the participants thought that as far as they do not have any symptoms of disease, they are not threatened.

"No one thinks it may happen to them, some suggest me to go and take mammography or Pap smear test, but I say no, there is nothing wrong with me. The same is for CRC, I may not get it." (Female, FG2).

When asked about the CRC screening tests, few participants were familiar with the word "FOBT" and for them, "colonoscopy" was more familiar than other CRC tests. Even some of the participants did not have a clear understanding of FOBT and viewed it as a test for detection of parasitic infections.

Some of the participants believed that the lack of knowledge among community members is one of the reasons for not doing the CRC screening.

"For sure, lack of knowledge is one reason. There will be panic when there is no knowledge. Even hearing cancer is really bad." (Male, FG9)

After an explanation about the importance of taking CRC screening, some of the participants asked surprisingly "why physicians don't prescribe these tests?"

A number of participants noted that they would be willing to do FOBT if recommended by physicians.

"I won't do it unless my doctor asks me to do." (Male, FG10)

Some participants emphasized the role of mass media in promoting self care and early detection practices. They believed that raising awareness about CRC and screening tests through media can encourage people to do test. One participant suggested raising awareness on "FOBT plan" through the use of campaigns during special health occasion such as health week.

"They (public health officials) should have a plan during health week by the name of "FOBT" to raise awareness, put up banners, and have teasers that people over certain age can go to some stations for this test and say what the advantages of this test are." (Male, FG6)

3.4. Financial Problems

Cost of tests and inadequate insurance coverage were expressed by respondents as one of the common barriers. Most participants stated that the high cost of the test and medical tariffs played a central role in refusing to do CRC screening.

"Some people don't take the test because of the cost; just imagine how expensive it is, visiting a specialist. A lot of them can't afford it. For example, if a family has 2 or 3 people over 45 years old, if they want to take a screening test, it will cost them a fortune, so they won't take it." (Female, FG3)

Given the financial pressures and competing financial needs, many low income peoples are not willing to pay for health care until they face serious health problems. Some people believed that a large proportion of society belongs to middle or lower class; so, high life expenditure prevents them from paying attention to screening tests.

"It's not that we're as poor as a church mouse, but we've got loads of problems; kids' expenses, university fees." (Female, FG2)

Some FGD participants consider the lack of health insurance and low coverage of public health insurance as a major obstacle to taking CRC screening tests. They believed that having supplemental insurance can help them to overcome financial problems.

"Not all have insurance; we don't have it so we take." (Female, FG1)

A number of participants believed that CRC screening program is more likely to be successful if it is offered at no or low cost to the community, particularly for low- income families.

"All people over 50 years old should go 3 times to do stool test freely, what is wrong with it? Isn't the public health important to officials?" (Male, FG8)

3.5. Low Priority of Health Concerns

The majority of the participants noted low priority of health as a barrier to CRC screening. They mentioned this barrier as a cultural issue. Some participants noted that while individuals must view health as a priority, many of Iranian people, particularly women, give low priority to their health because of their shyness, sense of low self-worth, poverty, and competing priorities and relative to other issues of daily pressures.

"The tasks and problems, with which people have dealt every day, stop them visiting doctors or doing tests." (Man, FG8)

Participants also pointed out the lack of time in life and complained about their daily chores and very busy public and private laboratories.

"The health care centers are crowded and time consuming." (Female, FG3)

Some participants suggested that within Iranian context, obligating people to uptake CRC screening may sensitize the community on the importance of screening practices.

"It must be compulsory. Compulsion makes people do test." (Female, FG5)

3.6. Fear of Detection of Cancer

There is a high anxiety level associated with the detection of cancer. Some types of fear of cancer were mentioned by most of the participants as an important barrier to do CRC screening.

The fear expressed by some participants was described as: "CRC is incurable and this disease ultimately brings death"; so, they preferred not to do the test to reject discovering the disease and live more comfortably. Consequently, some said they would prefer to delay the diagnosis or not know.

"I saw many who fear to do the test because of a probable positive result; I myself have never done the test. Its treatment is difficult, better not to know." (Male, FG9)

Fear of being a burden on family members (economically, psychologically, and physically) was another type of fear expressed by some of the participants. They mentioned difficulties that may be imposed on the family as a result of the detection of CRC as one of reason for not attending screening. Women were more likely than men to cite this type of fear.

"We don't want to bother the family and relatives. We ourselves tolerate the disease, the ultimate result is obvious." (Female, FG3)

To overcome the fears, participants suggested raising community members' awareness and overcoming the unrealistic beliefs concerning the nature of CRC. A number of participants referred to the importance of physicians' role in shaping and promoting the culture of self care among community members.

3.7. Problems Related to Nature of CRC Screening Tests

Some of the participants believed that embarrassment and uncomfortableness to the process of CRC screening is another reason for not doing the FOBT and other screening tests. One participant suggested a blood test instead of stool test.

"Apparently special containers are delivered for feces and then give them back to the lab, it is disgusting. I think it is possible through a blood test, it is more comfortable." (Man, FG9)

Furthermore, a small number of participants mentioned commuting to the labs to give the samples of three times as a barrier.

One of the participants suggested that each local clinic should be equipped with laboratories; so, people are more comfortable when they need to go to give a test for three times.

3.8. Mistrust in the Health Care System

Issues related to trust in the health care system in general, and physicians specifically were mentioned by participants as influencing factors to neglect CRC screening. Participants mentioned problems associated with health system in terms of lack of physician recommendation, distrust of physicians, and poor physician-patient relationship.

Most participants believed that more importantly a physician should be a good psychologist so that the patients can trust them easily. They believed a friendly interaction between physician and patients is one of the most important reasons to accept physician recommendation in doing screening tests.

"If doctors get on well with patients, I think it (not doing tests) happens rarely, if doctors prescribe them, they don't go." (Female, FG5)

Participants agreed that poor physician-patient relationship is one reason for the distrust of physicians, leading to inhibit people from receiving services.

"Physicians don't know all that's going on and pay no attention to us." (Female, FG4)

Some others believed that in Iran, most physicians are "businessmen" first and physicians second: "(physicians)" pay more attention to own their financial interests rather than patient's health.

The majority of the participants in both sexes recognized that a physician recommendation and a good physician-patient relationship would increase motivation

to CRC screening. In their opinion, physicians have a special place in Iranian culture and people are expected to obey them more other health care providers.

"Family doctor pushes people to do the test; one of the most important things is to make people have a family doctor similar to having a lawyer. (Female, FG4)"

Furthermore, several participants worried about failure to diagnose and mistake in diagnosis of medical laboratories.

"Medical laboratory diagnoses are not reliable; it is possible that they are sometimes negligent." (Male, FG9)

4. Discussion

The majority of themes presented in our findings are similar to the findings of studies conducted in other countries including western countries.

Participants reported many fundamental, multifaceted, and interlinking factors affecting the CRC screening decisions. Similar to several previous studies (18, 19, 23) the findings of the present study revealed inadequate knowledge about CRC and CRC screening as a reason to not participation screening test. Through their systematic review and meta-study synthesis of qualitative investigations, Honein-AbouHaidar et al. (2016) reported that awareness affected views of cancer, attitudes towards CRC screening modalities, and motivation for screening (24). On the other hand, having insufficient and wrong information may lead to a lower risk perception and, therefore, formed a barrier to CRC screening.

Participants placed great emphasis on the special role of physician engagement to raise community's awareness and knowledge about this issue. They also noted that it is necessary to address the issue of inadequate knowledge by designing and implementing community-wide health campaigns such as media campaigns. Few participants were aware that FOBT can work as a screening method for CRC. Similar to Kimura et al.'s study (25), participants could not distinguish between FOBT and Parasite Stool Test. This aspect of knowledge should be considered when designing intervention programs.

One of the main barriers was financial problems, including the high costs of test and lack of insurance coverage. In the other words, although having good knowledge was found to be critical to uptake CRC screening, accessibility to CRC screening tests are important challenges ahead. Indeed, as argued by Palmer et al. (26), even if a recommendation is made by physicians, CRC screening is accessible and affordable. The results of this study indicated that limited or no health insurance coverage and limited accessibility prevented a number of adults from screening. This finding is generally supported by the literature (19, 23, 27). As shown in the previous studies (28, 29), willingness to pay for health care is associated with household income. Many low income families face challenges regarding the cost of health care, primarily because of the presence of competing financial needs. These families typically pay only small portion of their income for health care, especially to get screening services.

A theme, which was unique to our study compared to other research which has mostly been undertaken in westernized countries, was that the majority of participants gave low priority to health care. This issue needs to be reconsidered within the Iranian socio-cultural context. Indeed, most developing countries give low priority to health when allocation funds. Most people, especially women in Iranian culture, often attribute low priority to health and symptoms and present late for screening or treatment. A number of participants raised reasons such as life problems, especially lack of time and busy life to setting low priority to CRC screening or any other type of health care. These findings are consistent with studies conducted by Salimzade, Javadzade, and van Rijn (13, 30, 31).

A majority of participants discussed some types of fear or uncertainty surrounding CRC screening tests. Some participants preferred to delay the diagnosis, because many of them believed that CRC was a fatal disease. Fear of possible discovery of disease is commonly expressed in cancer screening literature (13, 19, 23, 26, 30, 32). This finding emphasizes the importance of addressing the benefits of screening and correcting the false beliefs (e.g. cancer diagnosis does not always result in death,) through interventions (26). The fear of becoming a burden on family members, as another type of fear, can often preclude proactive CRC screening, even when breast cancer awareness is rather high. This type of fear is highlighted, especially among women who are the caregiver for all family members. In the present study, the problems related to the nature of CRC screening tests were described by phrases such as uncomfortableness, embarrassing, and time consuming. Bradely et al. (33) referred to problems such as 3 times and reluctance to collect stool samples as barriers related to the nature of CRC screening tests. Anticipated shame has been reported as a barrier to cervical screening in qualitative work with African women (34).

Participants reported lack of trust as an important barrier to screening. Trust is required, especially when a person lacks adequate knowledge about a given situation such as having partial knowledge of CRC screening. As argued by Ward et al., in conditions that risk may not be at the forefront of the decision including screening uptake, trust is more likely to be at the heart of whether or not people uptake in recommended behavior (35).

Participants mentioned that in Iran, physician recom-

mendation is the most important motivator of CRC screening. They believed that physicians are as counselors that people respect their opinions and advice. The importance of physician's role was highlighted in previous studies (13, 20, 30, 36). Participants, however, believed that physicians did not systematically recommend CRC screening to each eligible adult because of poor physician-patient relationship and paying little attention to health needs of people. Some researchers found that the distrust of physicians is an excuse for some participants not to obey physicians' advice in cancer screening (37, 38).

In this study, FGDs were moderated by a female researcher and cultural issues might have influenced the quality of data obtained from male participants.

4.1. Conclusions

The findings of this study are critical for guiding the most effective public health interventions targeting CRC screening tests. Accordingly, along with attention to socioeconomic barriers such as financial issues and insurance coverage, addressing the psychosocial barriers to screening is critical. Patients with unspoken fears, misconceptions, and an untrusted worthiness/undesirability relationship with health care provider require efforts to identify and address these barriers.

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