Barriers and Facilitators to Colorectal Cancer Screening in Vietnamese Americans: A Qualitative Analysis

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A thesis

submitted in partial fulfillment of the

requirements for the degree of

Master of Public Health

University of Washington

2013

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Program Authorized to Offer Degree:

Public Health, Health Services

University of Washington

Abstract

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Background:

Vietnamese Americans are the third largest Asian ethnic group in Washington State. Colorectal cancer (CRC) ranked as one of the most common cancers in Vietnamese Americans. However, CRC screening rates remain low among Vietnamese Americans. In one study, Vietnamese American participants reported screening rates of 48% for Fecal Occult Blood Test (FOBT), 20% for sigmoidoscopy, and 26% for colonoscopy.

Methods:

We partnered with a Federally Qualified Health Center (FQHC) in Seattle, Washington, to conduct focus groups as part of a process evaluation of an intervention to improve CRC screening rates. Using interpreters, we recruited and conducted three focus groups with 19

FQHC patients of Vietnamese descent who were between 50 and 79 years old. Transcripts were analyzed by three team members using open coding and axial coding. Major themes that emerged consisted of barriers and facilitators to CRC screening.

Results:

Barriers included the lack of health problems, comorbidities, challenges with medical terminology, and colonoscopy complications. Participants singled out the risk of perforation as a fear they have towards colonoscopy procedures. Facilitators included knowledge about CRC and CRC screening, sources of information and social networks, and physician recommendation.

Conclusion:

These findings can be used to develop more culturally appropriate CRC screening interventions and improve upon existing CRC screening programs for the Vietnamese American population and other similar immigrant groups.

Introduction

Colorectal cancer (CRC) has the fourth highest estimated incidence and second highest mortality rates in the United States in both sexes [1]. If CRC is detected early through screening, chances of survival for at least five years is 90% [2]. The United States Preventive Services Task Force (USPSTF) recommends CRC screening for the average risk population between 50 and 75 years old using Fecal Occult Blood Test (FOBT), sigmoidoscopy and FOBT, or colonoscopy[3].

Asian Americans are the fastest growing racial group in the United States, increasing by 46% between the 2000 and 2010 U.S. Census.[4,5] Among Asian American and Pacific Islanders (AAPIs), CRC ranks as one of the most common cancers, and the third highest cause of cancer mortality rate for both sexes[2]. Among certain AAPI ethnic groups, CRC incidence is actually increasing[6]. However, AAPIs have lower reported rates of being up-to-date with CRC screenings than non-Hispanic whites[7-10]. As of 2012, screening rates for whites are at 59.8%, compared to 46.9% for Asian Americans [11]. AAPIs with particularly low screening rates tend to be recent immigrants, poor, and uninsured [12]. Reported barriers to any type of CRC screening adherence include low educational attainment, lack of health insurance, and limited English proficiency [8].

Vietnamese Americans are the fourth largest Asian ethnic group in the United States [4] and the third largest Asian ethnic group in Washington state as well as in metropolitan Seattle [13,14].Vietnamese Americans have the fourth highest proportion of people living in poverty among Asian ethnic groups and tend to speak primarily Vietnamese in the household instead of English [15,16].

Data from Los Angeles Cancer Surveillance Program and California Cancer Registry showed CRC to be the third and fourth most common cancer in Vietnamese American women and men, respectively [17]. Screening rates for Vietnamese Americans tend to be lower than in

non-Hispanic whites[16,18]. In one study set in California and Texas, Vietnamese American participants reported screening rates of 48% for FOBT, 20% for sigmoidoscopy, and 26% for colonoscopy[19].

Little information has been collected qualitatively on factors associated with CRC screening among the Vietnamese American population. This study intended to collect information using four focus groups from Vietnamese men and women who have and have not been screened. To encourage discussion among participants we proposed to convene focus groups by gender and screening status. We conducted these focus groups as part of a process evaluation of an intervention of medical assistants who distributed educational DVDs and pamphlets to promote CRC screening among Vietnamese patients at a Federally Qualified Health Center (FQHC). The RE-AIM model, which evaluates public health interventions based on reach, efficacy, adoption, implementation, and maintenance, was used to inform the process evaluation[20].

Methods

In this qualitative study using a focus group approach, participants were recruited from the Vietnamese patient population in a FQHC in Seattle, Washington. This study was approved by University of Washington's Institutional Review Board.

Study Design

Using focus groups for research studies has produced rich and complex data that would otherwise remain hidden through dynamic interactions among the focus group participants[21-24]. Previous studies on AAPIs and CRC using focus groups have been used[18,25-27] to inform subsequent research and interventions. In particular, Nguyen et al had shown that conducting focus groups with Vietnamese men and women on CRC screenings was feasible[25].

Sample/Setting

Using convenience and snowball sampling methods, we recruited FQHC patients of Vietnamese descent who were between 50 and 79 years old. We extended the maximum age beyond the USPSTF recommended age of 75 to 79 to account for participants who qualified for screening during the start of the intervention in 2009. Recruitment flyers were posted in the clinic, and clinic staff assisted with distributing flyers and informing eligible patients about the study. Patients interested in participating were invited to provide their contact information at the clinic. Participants who had verbally consented were asked to invite eligible family and friends to contact research staff. Using interpreters, we contacted interested patients via telephone at times of their convenience. Interpreters described the study purpose and procedures, determined the patients' eligibility, ascertained verbal consent, and scheduled them with the appropriate focus group.

Instruments

A semi-structured interview guide (Table 1) was developed based on the CRC screening intervention and was modified iteratively throughout data collection based on responses received during the focus groups. Questions included "Have you been offered this DVD?" and "How did you decide to get CRC screening?"

Data Collection

All focus groups were conducted at the FQHC. We obtained written informed consent in the Vietnamese language from each participant. Participants also completed a demographic form consisting of six items, including age, marital status, and years of education. The lead moderator explained the purpose of the study and ground rules (e.g., speaking one by one, turning off cell phones, and keeping names confidential).

Using a semi-structured interview guide, the lead and co-moderators then conducted the focus groups with two bilingual Vietnamese interpreters. The moderators invited participants to share any CRC related screening experiences, and based on the participants' responses, they asked questions and probed for more detailed responses. All focus group sessions were audiorecorded and lasted approximately 90 minutes each. Participants received $20 gift cards at the end of each session.

Data Analysis

Research staff transcribed the English components of the focus group audiorecordings verbatim. A bilingual Vietnamese research team member also checked the lexical equivalence of the interpreted discussions via the audiorecordings.

We used an inductive and iterative process to conduct our qualitative analysis [21,28]. Three research members representing the disciplines of public health and nursing reviewed the transcripts and performed open coding[29], going through the transcripts line by line independently to identify trends and themes from participants' phrases, statements, and quotes. We then met to discuss and come to consensus on the codes that emerged from the data. We organized the data using Atlas.ti version 6 and developed a preliminary codebook. Axial coding[29] was then used to connect the themes to each other under the major categories of "barriers" and "facilitators." The decision to categorize these themes into either barriers or facilitators to CRC screening emerged from the participant responses when asked what helped or prevented them from being screened, as well as other discussions during the focus group. The codebook was refined to reflect these connections.

Results

Participant Demographics

Nineteen Vietnamese patients participated in the focus groups: six women who had screened for CRC, six women who had not screened for CRC, and seven men who had screened for CRC. We did not succeed in recruiting men who had not screened for CRC. Table 2 shows the demographic information of the focus group participants. The majority of participants were 71 years old or older, born in Vietnam, lived in the United States for more than ten years, and received ten or more years of education.

Major Themes

Six themes emerged from the focus groups. Themes that were classified as barriers included lack of health problems, having comorbidities, challenges with medical terminology, and colonoscopy complications. Facilitators included knowledge about CRC and CRC screening, physician recommendation, and the influence of social networks. A list of major themes and relevant quotes from patients can be found in Table 3.

Barriers to CRC Screening

Lack of Health Problems

The lack of health problems prevented women from seeking CRC screening (See Table 3, 1A). A woman who has not had a colonoscopy expressed, "And I feel that I am absolutely normal. I have no symptoms of having any problems with my digestive system or having any stomach aches. My stomach is good. Condition is good."

Comorbidities

Men cited diabetes as a specific condition that can make colonoscopy screening more difficult for them because of the preparations (See Table 3, 1B). Participants with diabetes

mellitus expressed difficulty with not eating for twenty four hours prior to the procedure. One man expressed, "Before we have the colonoscopy, they all ask us to not eat for awhile. There's no sugar or level of sugar in my blood [so it is] very low...I don't know if I can handle it." Another man stated, "...As for me, I have diabetes so staying away from food for a day, I couldn't help myself and that night I had milk. So in the following morning...they said that because I had milk, I could not go on with my test."

Challenges with Medical Terminology

Challenges with understanding the medical terminology that moderators used were found among focus group participants (See Table 3, 1C). Both male and female participants confused FOBT with stool tests for parasites, using the two tests interchangeably when describing their experiences. Furthermore, participants frequently used "nurse" when referring to who would offer CRC screening materials to them as part of the intervention study. Upon further inquiry, a male participant provided the following description: "[The person who showed me this information] is that person who took me in and take my blood pressure." The role in charge of this task at the clinic was not the nurse, but the medical assistant. The interpreters confirmed that the Vietnamese language has no equivalent for “medical assistant.”

Colonoscopy Complications

Participants also noted that the preparation needed before colonoscopy and the risk of perforations during the procedure as barriers to getting screened (See Table 3, 1D). Participants expressed nervousness when faced with drinking the solution needed to prepare for colonoscopy. A male participant stated, "For most of us, we hesitate when we saw a big bottle of solution. If we have a pill, then that would be better. Most of us just really kind of get nervous when we saw a big bottle of solution that we have to take."

Both male and female participants expressed fear of perforations during colonoscopy. Even participants who have been screened conveyed their concerns about the risk of perforations, after hearing the experience of someone who experienced such a complication. As one man stated, "The other things that people are afraid of are the risk of having their intestine being punctured, their colon being punctured...Because my younger sister, that had happened to her."

Facilitators to CRC Screening

Knowledge about CRC and CRC screening

Knowledge about CRC and CRC screening helped both genders decide to get screened (See Table 3, 2A). With awareness of the recommended age range, participants were more motivated to get screened. Materials from the CRC screening intervention increased awareness and motivated participants to get screened. After watching the DVD, a participant expressed, "It give me the strength and not only just me, but other people too to make the decision to go in to [get] tested."

Physician Recommendation

Participants across gender and screening status mentioned physician recommendation as an important facilitator to getting screened (see Table 3, 2B). The respect and trust participants have for the physician, seen as the "most important person" within the clinic reassures participants to get screened for CRC. Trust in the physician overrode concerns that participants may have had, such as the aforementioned fear of perforations. A female participant who had expressed concerns about perforations also stated, "So I recommend everyone to be calm during the procedures and because the doctors know what they're doing and they swear to take care of their patients so we all need to be calm and let them do their job."

Sources of information and Social Networks

Hearing about experiences with CRC from within their social network, which can include family and friends, had motivated participants to get screened (See Table 3, 2C). The participants' introduction to CRC is through word of mouth and experiences of people in their networks, particularly the experiences of family and friends. For instance, a female participant said that she knew "a lady who is just barely 40 years old and she died after a few months of finding out she has colon cancer." They also heard about procedures related to CRC screening from their friends, with one woman stating that she heard from friends "that now they don't give the liquid anymore" for colonoscopy.

Discussion

This is the one of the few qualitative studies that explicitly analyzed the barriers and facilitators Vietnamese American immigrants face for CRC screening. Previous studies have collected quantitative data with regards to facilitators or barriers associated with CRC screening in Vietnamese Americans[8,18,19]. We found similarities and differences to the results reported in these studies, which are reported below.

Barriers

Lack of Health Problems

Lack of symptoms had prevented or hindered focus group participants from being screened for CRC. Having no symptoms has been well-documented throughout the literature among Vietnamese Americans and other underserved groups as a barrier to CRC screening[18,19,30,31].

Comorbidities

Having comorbidities also hindered male participants from being screened. While one cohort study examining veterans had shown a positive association between comorbidities and screening incidence[32], a systematic review concluded that the impact of comorbidities on CRC screening was inconsistent[33] and reviews of medical records showed no significant association between comorbidity and CRC screening [34,35]. The mixed results may signify that more research needs to be conducted to explore the association between comorbidities and the uptake of CRC screening as well as pre-procedure limitations.

In this study, male participants reported difficulty following the preparation for their colonoscopy because of diabetes mellitus. They singled out fasting as an especially difficult requirement for colonoscopy. Of note, previous systematic reviews and meta-analyses of epidemiological studies have indicated diabetes mellitus to be a risk factor for CRC[36-39]. Diabetes mellitus has been associated with inadequate bowel preparation for colonoscopy in prospective, quantitative studies[40,41]. If colonoscopy preparation hinders diabetic patients from being screened, this may lead to a later diagnosis of CRC among this population. Future research is needed to explore how medication adjustments may ease the preparation individuals with diabetes mellitus need to successfully complete colonoscopies.

Challenges with Medical Terminology

Throughout our focus groups, participants reported difficulty understanding the medical terminology used in CRC screening, specifically with FOBT. Another study also found that Vietnamese had mistaken FOBT for stool testing for parasites, as many reported being tested for them at the time of immigration[18]. To our knowledge, this is the only other study that mentions

this particular challenge. A better description of FOBT is needed for immigrant populations to avoid confusion with stool tests for parasites and potential overestimates in self-reported FOBTs.

Colonoscopy Procedures

Participants in these focus groups said that the colonoscopy procedures, including the difficult preparation, either prevented them or made them hesitate from getting screened for CRC. This is consistent with previous studies with Vietnamese Americans[18,19] and other minority populations[42-44].

Across gender, our participants singled out the risk of perforation as a barrier to undergoing a colonoscopy, which has not been found in other CRC studies on Vietnamese Americans. A search on PubMed produced only three studies that discussed the fear of perforation as a potential barrier among non-Hispanic whites, African Americans, and Hispanics[31,45,46]. These studies utilized qualitative methods, conducting in-depth individual interviews. Palmer et al noted that the fear of perforation was among one of the reasons African Americans preferred FOBT to colonoscopy [45]. Our focus groups did not elicit a similar preference; however, future studies need to examine this issue given the lower colonoscopy uptake among Asian Americans compared to non-Hispanic whites[47].

Facilitators

Knowledge about CRC and CRC Screening

Knowledge about CRC and CRC screening as a facilitator has been reported in previous studies on Vietnamese Americans[8,18,19]. In particular, Nguyen noted that having heard of colon polyps was positively associated with receipt of CRC screening[19], which was consistent with our focus group participants who had been screened. Our findings support the results of others who

encourage the development of educational programs to improve knowledge on CRC and CRC screening in Vietnamese Americans to increase screening rates.

Physician Recommendation

The positive effect that physician recommendation has in motivating participants to get CRC screening is consistent with the literature found both among Vietnamese Americans[18,19,48] and other groups [49,50]. Two prior qualitative studies, using focus groups and in-depth interviews, respectively, suggest that social networks may be more influential than physician recommendation[26,51], as participants were unable to remember what they talked about with their physician. However, that was not found in our study. In fact, the majority of screened participants clearly remembered how their physicians approached the discussion of CRC screening and discussed how physician recommendation overrode any fears they had of being screened.

Sources of Information and Social Networks

We found that both men and women relied on their family and friends to learn about CRC, and that the CRC-related experiences, such as a family member diagnosed and treated for CRC, faced by their social network motivated them to be screened. The literature has shown the strong influence of social networks on Vietnamese patients' decision to be screened for CRC[26,48]. Our study is consistent with Walsh et al's findings that those who knew someone with CRC were more likely to be screened[18]. Other studies focusing on Vietnamese Americans and other Asian ethnic groups showed social support as a facilitator for cancer screenings.[8,52] However, these studies only focus on women. In our focus groups, men also found testimonials from family and friends motivating. Developing programs that encourages the sharing of CRC experiences among family and friends may serve as a motivator for CRC screening.

Limitations

We successfully recruited female Vietnamese participants across screening status and male Vietnamese participants who have been screened. Male Vietnamese patients who had not been screened proved hard to reach, and we were unsuccessful in recruiting them. Even after we changed our recruitment methods to snowball sampling, we still could not recruit any men who had not been screened. In a different study conducted with urban Hispanics, researchers managed to recruit males who had not been screened [53]. This may suggest that the reasons behind the difficulty to recruit this population may be culturally specific. As men in this population are less likely to be screened[34], we may have missed other barriers and facilitators to CRC screening.

Furthermore, participants' screening status was based on self-report. While medical records would have been a more accurate indicator of screening status, this was not feasible for the scope of our focus groups. We used interpreters to translate from Vietnamese to English and vice versa between the focus group moderator and the participants. Ideally the focus group moderator would be bilingual in order to preserve the nuance of the native language used.

Conclusion

Despite these limitations, our study is one of the few qualitative studies that examine the barriers and facilitators to CRC screening in Vietnamese Americans. Through the focus groups we have uncovered information that adds to the literature and has not been previously captured through published surveys. These findings can be used to develop more culturally appropriate programs and improve upon current CRC screening programs for Vietnamese Americans and other similar immigrant populations.

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Table 1. Sample Content of Interview Guide

Question
Have you been offered this pamphlet?
Describe how the DVD was offered to you.
How did you decide to get CRC screening?
(If screened during intervention phase) What factors have made you continue/ not continue to get CRC screening?
What would help you to get screened for CRC?
What are barriers that prevented you from getting screened for CRC?

DVD = Digital Versatile Disc
CRC = Colorectal cancer

Table 2. Participant Characteristics (N=19)

Variables	**N**	**%**
Sex		
Male	7	37
Female	12	63
Age		
50-60	3	16
61-70	6	31
71 +	10	53
Years in U.S.		
Less than 10 years	4	21
10-20 years	12	63
More than 20 years	3	16
Marital status		
Married	13	68
Separated/Divorced/Widowed/Unmarried	6	32
Years of Education		
Less than 10 years	6	32
More than 10 years	13	68

Table 3. Barriers and Facilitators to Colorectal Cancer Screening

	Theme	**Participant Quote**
1	*Barriers*	
1A	Lack of Health Problems	"I don't have diabetes, high cholesterol, or high blood pressure. If my stool seems regular...and well that's why I didn't request for a stool test."
1B	Comorbidities	"But for those who have diabetes or have to inject insulin they [are] very afraid or [hesitant] to go through [these] procedures."
1C	Challenges with Medical Terminology	"...I've screened from the stool to find any illnesses concerning the digestive system...My stool was tested and there were bacteria in there and I was given antibiotics but have not been having the colonoscopy yet."
1D	Colonoscopy Complications	"For me I think I'm kind of worried about my position during the procedures. If I move in some way, I'm afraid something might be damaged during the procedures. So I'm thinking maybe there's a puncture in the colon."
2	*Facilitators*	
2A	Knowledge about CRC and CRC Screening	"As for me, I didn't see anything that I should be afraid of...If I have enough information to understand and also to find out all the symptoms and have this illness, then I don't think there is anything that I should be concerned."
2B	Physician Recommendation	"So if the doctor recommends that...we should not go against his words. He knows what's best to treat us and we as patients should listen to the doctor."
2C	Sources of Information and Social Networks	"...I have a friend who is 50 something years old and found out that that person had colon cancer. And so he had either chemotherapy or radiation therapy and for awhile he had to have a tube right here to deliver stools...No I did not [hear about colon cancer before this friend]. Because seeing my friend like that, I was just terrified. And therefore, I had to ask to have [the colorectal cancer screening] done."

CRC = Colorectal cancer