

## **Evaluation of a Promotora-led Intervention on Colorectal Cancer among Hispanics: Findings Related to Perceptions and Communications**

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### **Abstract**

We implemented a home-based group educational intervention in the form of home health parties (HHPs) among Hispanic men and women in the Lower Yakima Valley of Washington State led by trained bilingual promotoras. Baseline and follow-up responses to questions among participants were compared and related to communications about colorectal cancer (CRC) screening. Participants' perceptions of the CRC related educational information presented were documented as measures of effectiveness of the HHPs, as well as, possible indicators of their intentions to engage in timely CRC screenings. The group based educational sessions resulted in positive participants' perceptions about the benefits of the CRC related information and improved communications about CRC screening. Results suggest the benefits of utilizing promotoras' cultural knowledge and awareness to present content about cancers such as CRC in ways that are easily understandable to Hispanic participants that may result in improved communications and action about cancer screenings.

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### **Introduction**

Colorectal Cancer (CRC) is the third most common cancer diagnosed in both men and women and the second leading cause of cancer deaths in the United States (Myer, Mannalithara, Singh, & Ladabaum, 2012). The American Cancer Society (ACS) estimated that in 2011 there were 141,210 new cases of CRC, and 49,380 deaths (ACS, 2012a). The mortality rates associated with CRC are particularly concerning given that it can often be prevented with the removal of growths in the colon called polyps, and treatments are successful especially when CRC is diagnosed early.

Healthy People 2020 and the U.S Prevention Services Task Force (USPSTF) recommend that men and women 50-75 years old be screened for CRC in one of the following three ways: a

yearly high sensitivity fecal occult blood test (FOBT), sigmoidoscopy every 5 years coupled with a FOBT every 3 years, or a screening colonoscopy every 10 years (Centers for Disease Control and Prevention [CDC], 2012). When diagnosed at an early localized stage the 5-year CRC relative survival rate is 90%. However, when the cancer has metastasized the five year survival rate decreased to 12%, emphasizing the need for public health initiatives around CRC screening and follow-ups (ACS, 2012b).

In the last ten years there have been improvements in the reduction of CRC incidence and death rates among many U.S population groups. The majority of these advancements have been linked to prevention and early detection efforts, such as the utilization of recommended CRC screening procedures (ACS, 2011b). However, the

percentage of Americans who have been screened for CRC still remains below the national target (58.6% versus the *Healthy People 2020* target of 70.5%) with pronounced disparities among racial and ethnic groups (Centers for Disease Control and Prevention [CDC], 2012).

### **Hispanics and CRC**

Cancer is the leading cause of death among Hispanics in the U.S (ACS, 2012c). Hispanics are the fastest growing minority population in the U.S and according to the U.S Census Bureau, there has been a 43% increase in the Hispanic population over the last ten years (U.S. Census Bureau, 2011). By 2050 nearly 30% of all people living in the country will be Hispanic, suggesting that an increasing percentage of new cancer patients will be Hispanics if the trend continues (U.S. Census Bureau, 2011). CRC remains the second-leading cause of cancer deaths among Hispanic men and the third-leading cause among Hispanic women (ACS, 2012a). Additionally, CRC is the second-most commonly diagnosed cancer in both Hispanic men and women. An estimated 5,900 Hispanic men and 4,800 Hispanic women are projected to be diagnosed with CRC and 1,900 Hispanic men and 1,600 Hispanic women are expected to die from CRC in 2012 (ACS, 2012a). Moreover, Hispanics 50 years and older, are 15% less likely to have current screening tests for CRC than their non-Hispanic White counterparts (ACS, 2012a; ACS 2012c). In addition, uninsured Hispanic men and women 50 and older appear less likely to undergo a CRC screening than non-Hispanic Whites, 19.5% compared to 21.6%, respectively (ACS, 2012a). Therefore, the problems of non-compliance with recommended CRC screening guidelines and the high rate of late-stage CRC diagnosis are critical among Hispanics. As public health research continues to develop interventions to promote lifestyles changes conducive for preventing cancer, gaps remain in improving screening behaviors especially among Hispanics.

### **Barriers to CRC Screening and Early Diagnosis**

Generally, cancer incidence, morbidity, and mortality rates have been predisposed by social, economic, linguistic, and cultural factors in the Hispanic community (ACS, 2012b; CDC 2012). These factors have created barriers to CRC screening and early diagnosis, translating to non-compliance and higher rates of late-stage CRC diagnosis, particularly in poor and underserved Hispanic communities. Consequently awareness of and access to healthcare impacts the use of preventative services, such as cancer screening procedures and the delivery of cancer treatment creating disparities in cancer screening adherence that are especially pronounced among Hispanics.

In addition, existing data suggests that Hispanics have lower levels of educational attainment and are more likely to live in poverty (Pew Hispanic Center, 2011). Specifically, based on the most recent statistics, only 13% of Hispanics living in the U.S had received a bachelor's degree (compared to 31% of non-Hispanic whites) and almost 24% live in poverty compared to 9% of non-Hispanic whites (U.S Census Bureau, 2011; Pew Hispanic Center, 2011; Lopez & Cohn, 2011). Finally, health care access in the U.S. has been correlated with health insurance coverage with Hispanics being the least likely to obtain health insurance of any racial or ethnic group (Ward et al., 2009). Hispanics are much more likely than whites to work in lower wage occupations, such as agriculture, which in general do not offer employer-based health insurance benefits (Escarce & Kapur, 2006).

### **Promotoras and Colorectal Health**

Based on factors such as those highlighted in the previous section that serve as barriers and contribute to poorer cancer outcomes among Hispanics, one suggested approach has been the use of community-based health workers, often referred to as *promotoras* in Hispanic communities. *Promotoras*, legitimately recognized only three years ago by the Office of Management and Budget (OMB) as a professional taxonomy, have been utilized since the 1960's to reduce disparities, provide culturally relevant health services, and improve health behaviors and health effects, particularly in Hispanic populations (Ayala, Vaz, Earp,

Elder, & Cherrington, 2010; Health Initiative of the Americas, 2010; Swider, 2002). *Promotoras* are trusted and valued community constituents with a common desire evolving from their own community, to engage in information dispersal, health education and promotion, and community organizing (Ayala et al., 2010). Existing literature suggests that *promotoras* can serve as knowledgeable resources, effective health promoters, and liaisons between various constituencies, providers, and community residents to help with shared responsibilities, establish valued public health outcomes, and encourage retention and sustained participation in health interventions (Lasser, Ayanian, Fletcher, & Good, 2008; Walsh, Kaplan, Nguyen, Gildengorin, McPhee, & Perz-Stable, 2004; Lantz, Dupuis, Reding, Krauska, & Lappe, 1994). Additionally, more recent literature indicates that *promotora*-led/based programs have been used extensively with the Hispanic populations residing in different geographic regions within the United States and have the potential to be effective in delivering public health intervention strategies although few have focused on improving participants' communication skills (Ayala et al., 2010; Health Initiative of the Americas, 2010; Swider, 2002).

We implemented a home-based group educational intervention in the form of home health parties (HHPs) among Hispanic men and women in the Lower Yakima Valley of Washington State led by trained bilingual *promotoras* to improve knowledge of cancer in general and CRC in particular and CRC related screening procedures and to increase communications about and participation in CRC screening. The overall aim of the intervention was to address the problems of non-compliance with recommended CRC screening guidelines and the high rate of late-stage CRC diagnosis and mortality among Hispanic men and women. The use of *promotoras* in the current study was intended to improve and expand access and availability of information and services to underserved Hispanic communities as well as to provide the cultural context to discuss health issues such as colorectal health among people who speak and understand the same language with recognition of the cultural implications for

such discourse. Findings related to communications and participants' perceptions of the educational information presented by the *promotoras* during the intervention are reported here while other results regarding knowledge of CRC and CRC screening practices have been reported previously (Morales, Rao, Livaudais, & Thompson, 2012).

### **Purpose of Current Study**

The purpose of the current study was to compare participants' baseline and follow-up responses to questions related to communications about CRC screening and to document participants' perceptions of the CRC related educational information presented by the *promotoras* as measures of effectiveness of the HHPs as well as possible indicators of their intentions to engage in timely CRC screenings. The study was conducted in the Lower Yakima Valley of Washington State, a farming community with approximately half of the residents identifying themselves as Hispanics (U.S. Census Bureau, 2010; U.S. Census Bureau, 2011). The Valley also reports low rates for employment of Hispanics over the age of 16, with 30% speaking exclusively Spanish in the home, and with 43% reporting being born outside the U.S (Livaudais, Coronado, Espinoza, Islas, Ibarra, & Thompson, 2010; U.S. Census Bureau, 2010; U.S. Census Bureau, 2011). The region continues to experience an influx of individuals of Mexican descent in search of jobs primarily in agriculture or to join family and friends already living in the region. The demographic characteristics of the Lower Yakima Valley were ideal for a *promotora*-led intervention. A majority of Hispanics living in Yakima Valley, 93%, was of Mexican origin, and the term "Hispanic" is used henceforth to refer to those of Mexican heritage (U.S. Census Bureau, 2010; U.S. Census Bureau, 2011). The Institutional Review Boards at the Fred Hutchinson Cancer Research Center and New Mexico State University approved study protocol, procedures, and data analysis.

## **Methods**

### **Study Design**

The study design evolved collaboratively through partnerships among academics,

clinicians, and community members and highlighted collective aims, shared decision-making, and development of educational intervention materials. It was guided by community-based participatory research and community health worker models to develop the group educational intervention focused on improving underserved Hispanic participants' CRC related knowledge on increasing communications about CRC screening, and ultimately encouraging timely engagement in CRC screening practices (Walsh, Kaplan, Nguyen, Gildengorin, McPhee, & Perz-Stable, 2004).

### **Participants and Recruitment**

*Promotoras* helped recruit community residents at migrant worker community meetings, community faith-based organizations, and other community events to participate in the CRC prevention home health parties (HHPs). Community residents who were interested were eligible to host HHPs at their homes were recruited first, gave informed consent, and then assisted with further recruitment of other residents including friends and family members to participate in the intervention involving HHPs.

### **Home Health Parties (HHPs)**

As described previously a HHP was a facilitated and guided group discussion among 3-7 people held in the homes of consenting community members (Moralez, Rao, Livaudais, & Thompson, 2012). It was designed to serve as an informal gathering of recruited community residents, family members, neighbors, and friends to learn about specific health topics from trained bilingual *promotoras*. The facilitating *promotoras* created a friendly, informal, and linguistically appropriate atmosphere in the HHPs so that participants could feel comfortable talking about health topics that otherwise may be difficult to discuss with friends, family members, and/or health providers. The *promotoras* in this study were established and well-respected community residents of the Lower Yakima Valley. They were trained for two days by bilingual Fred Hutchinson Cancer Research staff located in Sunnyside, Washington that included one of the coauthors and covered

topics such as CRC, the patterns of CRC nationally among Hispanics and non-Hispanic Whites, the reasons for high CRC rates, ways to reduce CRC, national screening patterns among Hispanic and non-Hispanic Whites, and types of CRC screening. In addition during the training, *promotoras* were guided to review models of colons with polyps and cancers as well as FOBT kits and a colonoscopy online. There were five *promotoras* who facilitated and guided the HHP group education, four of whom were female. Each HHP was usually conducted by a *promotora* with a site supervisor from the program office in Sunnyside, Washington randomly attending as a quality control check. The language used in the HHPs was Spanish – the language that study participants were most fluent and comfortable in although the *promotoras* were bilingual and fluent in both English and Spanish.

The goal of the CRC specific HHPs was to encourage attending participants to learn about CRC, screening methods and prevention, and engage appropriately in screening. Overall, the HHPs included administration of the general cancer knowledge survey, baseline CRC survey, implementation of an interactive group educational session, and the distribution of resource guides and information on where to get screened locally. *Promotoras* when necessary also assisted interested participants in scheduling CRC screening appointments. The HHPs varied in time between 1.5 and 4 hours with the same flip charts and visual displays being used in all of the educational sessions. Staff from the local public health offices assisted in the development of the presentation and written materials to establish consistent and appropriate content, language, and literacy level. Further, to ensure consistency in the implementation of the intervention, the site supervisor from the program office in Sunnyside, Washington attended a random number of HHPs.

### **Procedures**

The specific study protocol included the following four steps: In step 1, *promotoras* explained the study procedures to the participants who gathered at the HHP hosted in their neighborhood before signing the informed

consent forms. All participants completed the general cancer knowledge survey. Only participants who were age-eligible to receive colon cancer screening (between the ages of 50 and 79) completed the CRC specific baseline survey. In the next step *promotoras* presented the interactive group educational session using flip charts, presentation slides, and visual aids including simulated colon segments. The content addressed in the educational session included the following topic areas: 1) What is cancer? 2) What is CRC? 3) Who is at risk? 4) How can the risk of cancer be reduced? 5) What is a FOBT? Sigmoidoscopy? Colonoscopy? And 6) What types of treatments are available for CRC? In step 3, which followed the presentation of the previously mentioned content, participants were encouraged to ask questions and discuss CRC related issues and concerns with the *promotoras* and other participants. *Promotoras* also provided participants information about available resources, about free or low cost local CRC screening locations, and how to access them. Approximately six months after their HHPs, in the final step, the same bilingual trained staff that had completed the CRC baseline surveys with participants between the ages of 50-79 years contacted them and completed the follow-up surveys.

In this study, 252 community residents attended at least one of the approximately 50 CRC HHPs that were held between June 2006 and the end of 2007. Community members younger than 50 years were not the intended audience of the intervention. However, they were able to attend the HHPs with their families and friends in an effort to encourage learning about CRC and to have them serve as influential people in decision-making about CRC screening by those age-eligible among their families and friends. Of the participants in the CRC HHPs, 70 were in the age-eligible range (between the ages of 50 and 79) to receive colon cancer screening and therefore asked to complete the CRC specific baseline and follow-up surveys. Of those, 65 participants signed the informed consent and completed both the general cancer knowledge and the baseline CRC specific surveys, 63 of them completed the follow-up surveys approximately 6 months after attending one of

the HHPs. Of the 63 who completed follow-up surveys, 2 were excluded from the McNemar analysis because of incomplete information/answers, yielding a sample size of 61 for that analysis. The current paper is limited to the results related to the comparison of the baseline and follow-up responses to questions related to communications about CRC screening and participants' perceptions of the educational information presented in the intervention as measures of effectiveness of the HHPs.

### Surveys

Two baseline surveys were administered in the form of the general cancer knowledge survey that was completed by all participants and the CRC specific survey that was administered to only those between the ages of 50-79 years. The general cancer knowledge survey contained 21 questions, including demographic questions, questions about access to healthcare and health insurance, and questions related to general cancer knowledge and beliefs. The CRC specific baseline survey included 12 questions, a majority (8 questions) of the questions about participants' knowledge and past use of existing CRC screening methods, one question about intention of getting the fecal occult blood testing (FOBT) test done in the next few months, and four questions about communications between participants and their family, friends, and/or healthcare provider/doctor about CRC screening. The follow-up surveys consisted of a total of 26 questions related to general cancer knowledge and beliefs, CRC specific screening practices in the past six months following the HHPs, future screening intentions for CRC, communications between participants and their family, friends, and/or healthcare provider/doctor about CRC screening in the past six months following participation in one of the HHPs, and about perceptions of the educational information presented by the *promotoras* in the intervention. The surveys used at baseline and follow-up were not identical but had similar items on communications that were analyzed to explore the differences. The baseline and follow-up surveys were completed by the same local bilingual staff trained in basic survey techniques, research design, and interview procedures because of the lower literacy and educational

level of the participants and because it was the participants' preferred method of answering questions. Both baseline and follow-up surveys were available in Spanish and English, however all surveys in this study were completed in Spanish.

### **Data Analysis**

Descriptive statistics were used to outline the study participants' demographic characteristics and to document participants' perceptions of the CRC related educational information presented by the *promotoras* in the HHPs. McNemar's test for marginal homogeneity was used to assess significant differences ( $\alpha = 0.05$ ) between pre- and post-intervention in terms of the proportion of participants who answered in the affirmative to the four questions related to communications about CRC screening tests. Specifically, the baseline survey asked about communication behaviors "ever" and the follow-up surveys asked about behaviors "in the last six months." In order to be able to compare changes in the participants' responses from baseline to follow-up, a variable to reflect "ever" was created at follow-up. If participants answered "ever" at baseline or "in the last six months" at follow-up they were counted as "ever" at the time of the follow-up.

## **Results**

### **Demographic Characteristics**

As reported in our recent publication, a total of 61 male and female participants between the ages of 50 and 79 participated in the CRC HHPs completing both baseline and follow-up surveys approximately six months after the HHPs. A majority of participants (67%) were between the ages of 50 and 59, and a majority was female (72%). Only 21% of the participants had completed 9th grade or higher while 26% had no health insurance.

### **Participants' Perceptions of Information**

Table 1 summarizes participants' perceptions about the educational information presented by the *promotoras* during the HHPs in terms of learning, learning something new about CRC, and about how easily understandable the information was. A majority of the participants

(71.4%) rated the presentations as excellent, 98.4% indicated that the information presented about CRC was easy to understand, and 85.7% also indicated that they had learned something new about CRC and CRC related screening. When asked about other health issues that could be similarly presented by *promotoras* participants indicated that they would be willing to attend HHPs on diabetes, breast cancer, cervical cancer, arthritis, nutrition, and depression.

### **CRC Screening Communications**

Table 2 provides a comparison of the baseline and follow-up responses to the four questions related to communications about CRC screening. There was a significant increase in the percentage of participants who asked their doctors for a CRC screening test after the *promotora*-led intervention at follow-up compared to baseline (25 versus 12; 41% versus 19.7%). There was also a significant change in the percentage of participants who reported at follow-up compared to baseline that their doctors had told them that they should receive a CRC screening test (27 versus 19; 44.3% versus 32%). With respect to communications between participants and their families and friends there was an increase in the percentage of family members and friends who had communications with the participants with suggestions that they get a CRC screening test following the intervention although the increases were not significant.

## **Discussion**

In the current study, Hispanic residents from the Lower Yakima Valley of Washington State participated in a *promotora*-led CRC intervention. The group based educational sessions provided during HHPs were associated with positive perceptions from participants about the benefits of the CRC related information in terms of learning something new and the ease of understanding the content. In addition, study results suggested that the intervention helped improve communications about CRC screening in terms of asking about getting a screening test between participants and their healthcare providers (doctors) and among participants and

**Table 1**

<b>Participants' Perception of Information (N = 63)</b>		
	<b>n</b>	<b>%</b>
<b>The information about colorectal cancer was easy to understand.</b>		
Agree	62	98.4
<b>I have learned from the presentation.</b>		
Agree	60	95.2
<b>Overall, how would you rate the presentation?</b>		
Excellent	54	71.4
Good	18	28.5
Fair	0	0
Poor	0	0
<b>During the presentation/home health party, did you learn something new about colorectal cancer and screening?</b>		
Yes	54	85.7
No	2	3.1
Don't know	7	11.1
<b>If our project offered group discussions on other health issues, would you be interested in attending them?*</b>		
Yes	55	88.7

(\*N = 62)

their family members and friends (some of whom attended the HHPs), although the latter was not statistically significant. These results have the potential to contribute to existing research on Hispanic health issues and add to the literature on group-based education and CRC screening interventions. The study findings also have the potential to contribute to the expanded use of *promotoras* who utilize their cultural and community knowledge and awareness to present content about health issues and preventive strategies in ways that are culturally appropriate to Hispanic participants often resulting in improved communications about prevention and timely screening behaviors. This is particularly important when such interventions are focused on health issues that negatively impact Hispanics such as CRC, the problems of non-compliance with recommended CRC screening guidelines, the high rates of late-stage CRC diagnosis, and the limited communications that individuals have with formal support systems (e.g., doctors) and informal support networks of family members and friends.

The intervention in this study utilized *promotoras* with the purpose of implementing an approach that enhanced accessibility of CRC related information and screening services

among underserved Hispanic communities in the Lower Yakima Valley of Washington State. Study findings suggest that the HHP based group education content that the *promotoras* presented was in a manner that a majority of the participants indicated was easily understandable (98.4%) and that they learned something new about CRC from it (85.7%). Livaudais et al., (2010) conducted an evaluation of utilizing *promotoras* to educate Hispanic women about breast cancer and mammography screening. They reported similar results to the current study with the majority of the participants reporting learning something new about breast cancer and easily understood the content (Livaudais, Coronado, Espinosa, Islas, Ibarra, & Thompson, 2010).

The information presented in the CRC HHPs here was perceived favorably by the study participants in terms of learning something new about CRC and in terms of being easy to understand. These favorable perceptions reported here about the content presented in the HHPs by the *promotoras* align with the improved CRC related knowledge reported previously ((Morales, Rao, Livaudais, & Thompson, 2012). Both, the favorable perceptions of the content and information

**Table 2**

**Comparison of Baseline and Follow-up: Colorectal Cancer (CRC) Screening Communications (N=61)<sup>1</sup>**

	<b>Baseline</b>	<b>Follow-up<sup>2</sup></b>	<b>p-value<sup>3</sup></b>
<b>Has a doctor ever told you that you should receive a colorectal cancer screening test?</b>	19 (32.0)	27 (44.3)	<b>0.005</b>
<b>Have any of your family members ever suggested that you get a colorectal cancer screening test?</b>	17 (27.9)	19 (31.2)	0.157
<b>Have any of your friends ever suggested that you get a colorectal cancer screening test?</b>	18 (29.5)	20 (32.8)	0.157
<b>Have you ever asked a doctor to give you a colorectal cancer screening test?</b>	12 (19.7)	25 (41.0)	<b>&lt;0.001</b>

<sup>1</sup>Percentages based on non-missing values

<sup>2</sup>Follow-up surveys completed approximately six months after intervention

<sup>3</sup>McNemar's test for marginal homogeneity (significance level 0.05)

presented and an increase in CRC related knowledge could have the potential to initiate changes in communications about CRC and engagement in timely screening behaviors. In her review article on outcome effectiveness of community health workers (CHWs), Swider (2002) similarly suggests evidence for CHW effectiveness with knowledge improvement outcomes as well as documented behavior change and health outcome changes from CHW health education interventions.

Overall, CRC HHP's were designed to increase knowledge and understanding of CRC and its screening, improve communications, and ultimately compliance with-screening guidelines. When participants were asked if there were other health topics that they would recommend for other HHPs that they would attend they suggested health issues prevalent in Hispanic communities including diabetes, arthritis, poor nutrition, mental health issues such as depression, and other cancers such as breast and cervical cancer.

Participants' answers to four questions were used to compare CRC screening communications between participants and their healthcare providers (doctors), family, and friends. Few previous studies have included improvements in communications with formal and informal social networks as a means to evaluate *promotora*-led interventions. Participants reported significantly improved communications with their doctors involving asking them about getting a CRC screening test.

In addition, significantly more participants indicated at follow-up that their doctors suggested they get a CRC screening test. This finding may reflect the increased attention that participants began to pay to their doctors and their recommendations after the intervention based on better education and understanding of CRC and early detection and diagnosis as well as the need for more reasoned and timely healthcare decisions. In their study, Bylund et al., (2011) evaluated minority cancer patients in a pilot communication skills training intervention to improve doctor-patient communication skills. Participants were divided into a face-to-face workshop as the intervention group and a control group that only completed surveys. The researchers discovered that in the intervention group post-test scores were significantly higher than pre-test scores. In addition, all participants agreed/strongly agreed that they would use the communication skills, 93% agreed/strongly agreed that the skills would improve their healthcare decision-making (Bylund, Goytia, D'Agostino, Bulone, Horner, Li, et al., 2011).

Although not significant, the increase in CRC screening communications with family members and friends suggest that HHPs could be modified in the future to better integrate informal support systems in CRC-related communications and engagement in screening efforts. The modifications could focus on integrating family members and friends attending the HHPs as active learners and include educational sessions that target improvement in their knowledge about CRC and its screening and enhance their



communication skills to initiate and sustain conversations about CRC screenings. This integration of family members and friends may also be important in light of the influence that social networks have on an individual's healthcare decisions (Goldsmith, 2004; Israel, 1985).

### **Limitations and Strengths**

There were limitations to our study including not having a control group for comparison purposes. However, the baseline and follow-up comparison indicates some significant change in CRC screening communications. Those differences were unlikely to have been due to another intervention or activity that occurred at the same time. Another limitation was our reliance on participants' responses and recall of information related to their CRC screening communications.

Our study also had several strengths. The intervention focused on providing CRC related education in a manner that participants indicated were easy to understand and helped them learn new things about CRC and CRC screening. As stated previously, the purpose of our analysis was to compare participants' baseline and follow-up responses to questions related to communications about CRC screening and to evaluate their perceptions of the CRC related educational information presented by the

*promotoras*. Both served as measures of effectiveness of the HHPs as well as possible indicators of participants' future actions to engage in timely CRC screenings.

### **Conclusion**

As demonstrated by the study findings in terms of participants' positive perceptions of the educational content presented by the *promotoras* and the improvement in CRC screening communications post-intervention, the use of *promotoras* to develop, facilitate interventions, and disseminate information on health issues needs to be replicated in other studies, with larger sample sizes and carefully defined target populations. Additionally, by modifying the HHPs we could integrate family members and friends attending the HHPs more effectively as active learners to improve their knowledge about CRC and its screening and enhance their own communication skills. This integration of family members and friends could prove important because of their influence as informal social network members on an individual's healthcare decisions. Improving individuals' communications with their formal and informal support systems can be particularly relevant in Hispanic communities on issues such as CRC and CRC screening based on their cultural traditions of respect for authority figures and experts such as doctors and the importance of and connectedness to family and friends.

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