Published in final edited form as:

J Cancer Educ. 2013 September ; 28(3): 582–590. doi:10.1007/s13187-013-0506-9.

Focus group evaluation of a culturally targeted educational brochure designed to increase colorectal cancer screening among low-income Latinos: process and outcomes

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Introduction

According to the American Cancer Society, approximately 142,820 people in the United States (US) will be diagnosed with colorectal cancer (CRC) in 2013 and 50,830 people will die from the disease [1]. CRC screening starting at age 50 is recommended for average-risk adults (e.g., no first-degree relative with a history of CRC before age 60) [2]. The burden of CRC could be reduced significantly if all recommended individuals underwent screening via colonoscopy [2, 3]. Despite increases in CRC screening rates in the US [4], screening colonoscopy is underutilized by Latinos, the country's fastest growing minority group [5], and the rates are reported at 47% for Latinos in contrast to 61.5% for non-Hispanic whites [4]. Screening disparities contribute to disparities in CRC incidence and mortality [4]. It should be noted that Latinas' rates of screening for other routinely recommended cancer screenings (breast and cervical cancers) are much closer to the rates of non-Hispanic white women, with 64.4% of Latinas adherent to mammography and 74.7% adherent to Pap tests (compared with rates of 67% and 79.1%, respectively, among non-Hispanic white women) [6]. For Latino men, the American Cancer Society no longer routinely recommends nor reports on Prostate-Specific Antigen (PSA) screening rates for prostate cancer [4], but in the recent past, rates for PSA screening lagged behind those of non-Hispanic white men (29.7% versus 42.9%, respectively) [7]. Low knowledge of PSA testing and high levels of cancer fatalism have been recorded as barriers to PSA testing [8], along with other sociocultural

barriers [9]. Overall, these data suggest that the low rates of CRC screening among Latinos do not just stem from the tendency to forgo cancer screening or access to care. Rather, it is likely that there are specific barriers to CRC screening that may be effectively targeted in culturally appropriate interventions.

Latinos face barriers to colonoscopy, including fear [10] and worry regarding colonoscopy [11], lack of perceived benefits from colonoscopy [12], low education [13] and health literacy levels [11], language difficulties [12], lack of awareness regarding screening [11], and lack of physician recommendation [14].

Culturally targeted interventions have the potential to effectively reach Latino audiences with cancer prevention messages [15], thereby increasing use of preventive screening and reducing cancer burden in this vulnerable population. Culturally targeted interventions have been shown to increase CRC knowledge [16], risk perception [17], and screening colonoscopy rates [18] among Latinos.

Latinos comprise the population majority of East Harlem, NY (the study location), providing opportunities for the research team to directly consult with members of the target audience. Through the East Harlem Partnership for Cancer Awareness (EHPCA) [19], a coalition of hospitals, community health centers, and community agencies, we have ongoing efforts to involve underserved minorities (primarily Latinos and African Americans) in cancer awareness and preventive care efforts. We regard community members as collaborators in the development of new studies, educational interventions, and outreach programs. In a past study, we administered cross-sectional surveys in face-to-face interviews in a predominantly immigrant population of 400 Latinos from diverse countries of origin to determine barriers and facilitators of CRC screening completion (colonoscopy or Fecal Occult Blood Test) [11, 12, 14]. These data informed the brochure developed for the current study. Sociocultural factors, particularly low English language proficiency, fatalism, health literacy, and fewer perceived benefits from screening were associated with lower screening rates [11, 12]. Having a regular physician, a colonoscopy referral, physician encouragement of colonoscopy, and less fear about colonoscopy were associated with screening completion [12]. Qualitative research with previous focus groups [20] also identified barriers to screening colonoscopy, including limited knowledge, embarrassment and fear about the procedure, and fear of finding cancer. Facilitators to screening included: a desire for peace of mind, trust and good communication with the physician, influence of family, friends, and community, and wanting to prevent CRC.

Having previously used focus groups to develop and evaluate a culturally targeted educational brochure on CRC and colonoscopy for African Americans [21], we adapted the brochure for a low-income, low-literacy Latino audience based on the above data. The rationale behind using a brochure as a communication tool was its cost-effectiveness and ease of dissemination [21-23]. If the brochure is proven effective, its distribution does not require significant personnel involvement and therefore can be easily utilized by primary care doctors and medical office staff. The brochure was designed to address sociocultural barriers and facilitators to screening in a variety of formats, including a narrative from a cancer survivor. The intervention aimed to attract a Latino audience through relevant language and photographs and to provide basic information in simple language about CRC, screening, and colonoscopy (see Table 1). The brochure was based on theoretical models of health behavior change, including the Health Belief Model [24], the Transtheoretical Model [25], the Dual Process Model [26] and Narrative Theory [27, 28]. We developed the brochure with the intent of testing its efficacy to increase screening colonoscopy adherence among low-income, urban Latinos from diverse countries of origin in a randomized trial funded by the National Cancer Institute. Before testing the brochure in the field, we

evaluated the responses to its content and design through focus groups with community members, the process and outcomes of which are reported below.

Focus groups have been recommended as a useful tool when designing interventions targeting specific populations [29]. The social interactions in focus groups allow for a broader spectrum of opinions to be discussed and additional insights to be gained through supportive and argumentative talk [29]. The purpose of conducting focus groups for the current study was two-fold: 1) to examine participants' responses to theoretically and culturally guided components of the brochure, 2) to obtain and respond to feedback about overall content and information presentation.

Methods

Print Intervention Development and Theoretical Components

The brochure was designed based on prior research [11, 20, 21], specifically our past study of barriers and facilitators to screening among an urban population of 400 Latinos. Based on the findings from the study, the print intervention was developed to target barriers and emphasize facilitators to screening colonoscopy using the Transtheoretical Model (TTM) [25], the Health Belief Model (HBM) [24], the Dual Process Model (DPM) [26] and Narrative Theory [27, 28]. Both TTM and HBM discuss factors that increase and deter health-screening behavior. These factors are referred to as benefits/barriers and pros/cons in HBM and TTM, respectively. For example, the TTM proposes that individuals move through a series of stages in the process of deciding whether to adopt a particular preventive health behavior (in this case, a screening colonoscopy). By emphasizing the benefits of CRC screening in a culturally targeted brochure, we seek to advance individuals' stage of readiness to undergo colonoscopy. By supplying information on facilitators (pros) and barriers (cons) of colonoscopy, the intervention is designed to increase perceived benefits (pros) while dispelling myths and lack of knowledge common in our target population (cons). In addition to pros and cons, TTM suggests that strategies that positively influence screening behaviors, such as encouragement of thinking beyond one's self, defined as an emphasis on individual's role in their family's and peers' well-being, are important targets of the intervention. Furthermore, the HBM proposes that those individuals who believe that a disease is curable if detected early and who trust that health practices are effective in reducing illness threat are more likely to engage in preventive health behaviors. Therefore, information about CRC preventability and curability is included in the brochure. Perceived risk, also a component of HBM, is addressed by presentation of statistics and facts relevant to Latinos. Our brochure also uses DPM [26], which discusses the role of emotions in one's health decisions. Because the colonoscopy procedure and the risk of having CRC can be distressing, we focus the content of the brochure on alleviating feelings of fear and worry by providing information on survival rates from detection of early stage CRC.

Finally, we aimed to develop a tool that would address CRC barriers and convey its benefits effectively by using narrative communication style and images that are visually attractive to our target community. Narrative style is a more subtle persuasion technique when compared to didactic communication style. It has been shown to facilitate information processing, address emotional and cultural issues, create the feeling of social connection to one's community, and promote changes in health behaviors [27, 28, 30]. By incorporating a survivor narrative along with images of Latinos and their families, we encourage readers to contextualize the implications of their health practices (thinking beyond one's self) [31], normalize their emotions about cancer and the procedure, and invoke feelings of ethnic identity. Ethnic identity has been described as "that part of an individual's self-concept which derives from knowledge of his or her membership in a social group (or groups) together with the value and emotional significance attached to that membership" [32]. A

person with strong ethnic identity may be likely to respond to a culturally relevant intervention because it may present the perspectives of other ethnic group members with whom s/he identifies. Table 1 provides further details about the brochure content and layout. The summary of theoretical components used in the development of brochure along with focus group responses to the components can be found in Table 2.

Recruitment

Eligible individuals: 1) were age 50 or older; 2) self-identified as Latino/Hispanic; 3) spoke English and/or Spanish; 4) were considered at average risk for developing CRC; 5) did not have a spouse who had participated in a group on a different day. (Spouses were encouraged to participate, but were required to attend a different focus group taking place on the same day in order to avoid potential contamination). Individuals with a history of CRC, at higher than average risk for CRC, and those who had already participated in a focus group for this study were ineligible. Recruitment took place at our primary care clinic and local senior centers where we have established relationships through the EHPCA. Recruiters passed out a flyer approved by our Internal Review Board (IRB) describing an opportunity to participate in a focus group session and the project coordinator's phone number. In addition, the project coordinator contacted participants from past studies who had consented to being called for future studies. Focus group participants also referred friends by word of mouth.

Focus Group Design and Topics

Groups were stratified by: 1) gender (male/female), 2) language (English/Spanish, depending on the individual's preference), and 3) prior colonoscopy experience (no colonoscopy/one or more colonoscopy). The groups were stratified by gender in order to promote a more comfortable discussion of sensitive topics among participants. Stratification by colonoscopy screening history was done in order to determine any significant differences in responses to brochure components between the groups. Thus, we aimed to differentiate potential motivators for unscreened participants from actual motivators for those who had been screened. This stratification also allowed us to study differences in attitudes as well as cancer and CRC screening knowledge between the screened and unscreened groups. Based on our prior work, we anticipated stronger fear and lower CRC knowledge among the unscreened participants [12, 21]. Questions were split into five sections: Introductory; CRC Knowledge; Screening determinants that varied based on participants with and without CRC screening colonoscopy prior to focus groups; Brochure Layout and Content. Table 3 provides the focus group outline and questions.

Session Proceedings

Each focus group began with review of an IRB-approved consent by the facilitator and a bilingual assistant, followed by the signing of informed consent (individually). Participants then completed a short demographic questionnaire. The guidelines of the focus group were explained to the group, followed by questions and discussion. Sessions were audio-recorded. Each session was 60 to 90 minutes. Snacks and beverages were available during the session, and each participant received \$40 for participating.

Analysis

After each focus group the facilitator created a written summary of participants' responses to questions based on audio recordings and hand-written notes. The assistant facilitator also wrote summaries for the sessions she attended that the facilitator incorporated into a final summary. The written summaries followed the focus group protocol order and structure and contained brief responses to each section of the script. Ideas that were discussed at length, opinions that were strongly agreed upon, as well as key dissenting opinions, were

highlighted in the summaries. The research team consisted of six people: two primary investigators, two bilingual focus group facilitators, one assistant facilitator and one research assistant.

After the summaries were compiled by focus group facilitators, two team members analyzed all focus groups summaries using methods similar to axial coding described by Strauss and Corbin [33]. The responses to each section were reviewed in the context of the theories employed in the brochure development (Table 2). The analysis was performed by hand, following the focus group protocol.

The results from the first four focus groups were analyzed and the revisions were incorporated into the brochure before the last two focus group sessions. The last two focus groups were held for Spanish speaking men (n=10) and Spanish speaking women (n=6) with no history of colonoscopy and were not part of earlier focus groups. This approach helped us to verify the appropriateness of the revisions and allowed for continuous improvement of the intervention while collecting necessary information from the participants. When all focus groups were completed, major trends and key differences across groups were summarized. The differences were most pronounced between screened vs. unscreened groups. This led to the sorting of responses in accordance with participants' screening status. Descriptive statistics were analyzed using SPSS 19.0.

Results

Demographics

Six focus groups were conducted with 34 participants ranging in age from 50 to 78 years with a mean age of 65.0 (SD=8.5). There were an equal number of men and women (n=17 for each gender). Most participants (58.8%) had at least a high school level education. A significant portion of participants (40.6%) had a yearly income of less than \$10,000, while almost as many (37.5%) had incomes between \$15,000 and \$24,999. Most identified themselves as Puerto Rican (n=21; 61.8%). Other countries of origin included: Dominican Republic (n=4), Cuba (n=3), Mexico (n=2), Colombia (n=2), and El Salvador (n=1). The majority of participants (88.2%) had a regular healthcare provider; 79.4% had public health insurance (Medicaid or Medicare).

Four focus groups were conducted in Spanish (n=27); two focus groups were conducted in English (n=7). Overall, there were 18 participants with prior history of colonoscopy and 16 participants with no colonoscopy. All focus groups were completed within a one month period (January-February 2012).

Responses to theoretically guided components of the brochure

Discussions with screened and unscreened participants across language and gender lines revealed their responses to components of a brochure designed to alleviate cultural barriers and build on identified facilitators. Participants expressed positive feedback about brochure content and suggested adding more information that would emphasize CRC benefits, such as preventability and curability, as well as addressing fear and worry. Thus, some participants suggested including information that the procedure is less painful than generally perceived, while others expressed interest in CRC prevalence and curability statistics. Participants also indicated the need for information for those individuals who do not have health insurance in order to address cost barriers. Overall discussions revealed a noticeable trend towards addressing CRC screening barriers and the need for additional encouragement and emphasis of benefits as consistent with HBM and TTM.

Furthermore, the majority of focus group members agreed that visual components needed to be more representative of the East Harlem community, which suggests that ethnic identity is an important factor affecting response to the print intervention. For example, participants wanted to see photos of Latinos with darker skin. One member articulated that the faces on the cover did not look like many of the Latinos he knew in the community. Others suggested adding more males and young people. In addition, both male and female participants provided positive feedback about the survivor story. They agreed that the choice of a male survivor appropriately addressed machismo while the narrative nature of the story conveyed the image of a community member with whom participants could identify. Therefore, the usage of a survivor story helped to convey information within the participants' social context and evoked feelings of ethnic identity in our target audience. When given a choice between diverse images of Latino community members, participants preferred a set of photographs of seniors with their grandchildren and "happier-looking" images. This response is consistent with the notion that "thinking beyond oneself" is a notable component of the brochure that may potentially affect participants' future screening behavior. Other suggested improvements were to simplify the title, write telephone numbers numerically so an older audience would understand how to call (e.g., 1-800-4-CANCER was an unfamiliar format for some), and in the Spanish language version, using a term for "stool" ("heces") that is more universally understandable.

We implemented revisions suggested in the first four focus groups and presented the modified version of the brochure in the later focus group sessions. We included images preferred by earlier focus groups participants and changed the title from "What Latino Men and Women need to know about Colorectal Cancer Screening" to "Colon Cancer Screening: Information for Latinos." We added New York City's information hotline "311" which provides information about free colonoscopies from the Department of Health, and added numerical telephone numbers for other information lines. We also modified wording based on focus group feedback.

Finally, the study design provided us with an opportunity to further explore shared beliefs about cancer prevention and screening determinants, particularly with regards to barriers to CRC screening. Differences in perceptions and knowledge about CRC and the colonoscopy procedure were also noted between the groups.

Shared cultural beliefs between screened and unscreened participants

Barriers to CRC screening via colonoscopy were discussed amongst all groups. Lack of knowledge about CRC and screening were universally acknowledged as barriers to colonoscopy for Latinos. Participants agreed that lack of knowledge about the procedure made them more anxious about it and, therefore, less likely to have one. Fear was a common topic of discussion. Fear of the procedure, particularly fear of pain, was commonly acknowledged as a problem and was also associated with lack of knowledge. The laxative preparation was cited as a common aversion. The theme of "machismo" (hyper-masculinity) among Latino men came up equally among men and women as a barrier to colonoscopy, particularly because of its association with anal sex. It was also agreed upon that men are less motivated to undergo screening than women and probably have a higher incidence of CRC due to prejudice towards screening and unhealthy diet. The importance of a healthy diet in CRC prevention was emphasized along with regular doctor check-ups and was seen as necessary to prevent cancer. Home remedies were discussed as a popular solution to various health issues.

Key differences between screened and unscreened participants

There were noticeable differences between screened and unscreened focus group members. Focus group members who completed screening expressed the opinion that “One must care for themselves if they want God to help them.” A positive attitude (lack of fatalism) was important to participants who had been screened: they believed that early detection would increase their chances of preventing and/or treating cancer. Screened group members also mentioned having good relationships with their healthcare provider, including good communication and trust.

Fear of cancer and colonoscopy, a common barrier cited in all focus groups, appeared to be of a more personal nature (as opposed to a discussion of the topic) among participants who had not been screened in comparison to those who had completed a colonoscopy. Unscreened men expressed more fear and prejudice towards the procedure than unscreened women.

There was also a noticeable and expected gap in colonoscopy knowledge between individuals who had completed a colonoscopy versus those who did not, and a smaller gap in general cancer knowledge. Although unscreened participants were only able to discuss potential motivators, they agreed that more information and a recommendation from a physician would likely motivate them to undergo a colonoscopy.

Discussion

The purpose of this study was to conduct focus groups to evaluate the appropriateness of a culturally targeted and theoretically-guided educational brochure developed for Latinos to increase CRC screening via colonoscopy. Interventions that are developed to target a specific cultural group may be more efficacious for promoting preventive health behaviors than those developed for the general population [30, 34]. In their review of interventions to promote CRC prevention, Rawl et al. recommend the use of theory to inform culturally relevant health behavior interventions [35]. Our study is consistent with this recommendation as we present a theory-guided print brochure and analyze target community responses to it through focus group discussions. This approach allowed us to: 1) evaluate qualitatively the effectiveness of individual brochure components; 2) make improvements to the educational material by making it more visually representative of the target audience and clarifying confusing content; and 3) further explore screening determinants and knowledge gaps found amongst low-income urban Latinos in order to confirm relevance of the intervention content presented. The focus group design that included splitting groups along gender lines, as well as employing bilingual, ethnic and gender concordant facilitators, may have enabled participants to speak more freely about their experiences and perceptions. Topics were introduced in new focus groups until saturation (redundancy) was reached [33, 34].

Through this study, we learned that Latinos in the community still have a significant amount of fear regarding cancer and the colonoscopy procedure, which is consistent with our previous findings [12, 20]. Though the educational material we developed is a comprehensive brochure on CRC, the messages we heard most in focus group regarded the widespread sentiment of fear, which seemed in large part to hinge on lack of knowledge. We found consistently that uncertainty and anxiety—both of which can be associated with lack of knowledge—led to participants’ feelings of fear and served as a deterrent to proactive behavior, such as attending doctor’s appointments and having a colonoscopy. Several studies have shown that education and awareness of CRC screening play an important role in promoting screening behavior [11, 13, 36]. Moreover, we observed that screened study participants expressed less fatalistic beliefs and showed higher positive attitude towards

screening than the unscreened participants. This supports the results from a recent study [37] which demonstrated that fatalism was a significant contributor to CRC screening non-adherence among Hispanics and Asians. Finally, our study revealed that such components as thinking beyond oneself and ethnic identity stimulate active responses among members of our target audience. Our results highlight the need for culturally appropriate interventions targeting lack of knowledge and encouragement of positive attitude in this population.

This study has some limitations. Although initially we planned to have groups with screened and unscreened participants in both English and Spanish languages, we were unable to hold groups in English for unscreened participants. We held Spanish focus groups for unscreened men and women, but analysis across language groups and by screening history could benefit the study and reveal additional trends not possible in the current distribution of participants. It is also possible that people who had a colonoscopy or who know people who have had cancer were more interested in discussing the topic and these circumstances affected the type of feedback we received. Second, most of our participants were Puerto Rican, and while they represent the majority of Latinos in East Harlem (and therefore, the largest component of our target audience), it is possible that we may have gathered different results had the sample been more diverse with regard to country of origin. Despite this sample distribution, we were able to draw diverse participants from North, Central, and South America and the Caribbean.

Identification of theoretical and cultural components of screening behavior and their incorporation into print interventions provides a theory-guided method that can be adapted for diverse population groups. Evaluation of a brochure using focus groups comprised of community members can be a valuable tool in refining an intervention prior to a more extensive study of its effectiveness using a randomized clinical trial. Focus group participants from the target community can provide opinions and insights into their perceptions, knowledge, and what they and their peers need in a healthcare intervention. The results of a randomized trial testing the brochure's efficacy to increase adherence to screening colonoscopy among average-risk, Latino primary care patients will be reported in the future.

Acknowledgments

We would like to thank all the community members who participated in focus groups and the East Harlem Partnership for Cancer Prevention Community Advisory Board for sharing their thoughts and opinions. We would also like to thank Alejandro Varela for his expert facilitation of focus groups for men, Clarissa Martinez for assisting in focus groups for women, and the rest of our staff for recruiting participants for focus groups. This study was funded by the National Cancer Institute, Grant # R01 CA140737-01A2.

Biography

Dr. DuHamel is an Attending Psychologist in the Department of Psychiatry and Behavioral Sciences at Memorial Sloan Kettering Cancer Center and Director of Research Development for Immigrant Health and Cancer Disparities Service. She is also a Professor of Psychiatry at Weill Cornell Medical College. Dr. DuHamel is a health psychologist with expertise in helping patients cope with chronic illness and stressful life events and the use of cognitive behavioral therapy (including strategies such as hypnosis) to reduce their anxiety and depression and improve quality of life. She provides interventions to individual patients and survivors, and at times she also meets with members of their families. In addition, she works as the psychological liaison to the Colorectal Disease Management Team. Dr. DuHamel's research interests include investigating the barriers and supports that affect colorectal screening participation among minority populations; developing cognitive behavioral interventions for bone marrow transplant recipients; and increasing quality of life among

patients and survivors, including their sexual health. She has received research funding from the National Cancer Institute and the Department of Defense.

Lina Jandorf is the Director of Cancer Community Outreach in the Department of Oncological Sciences as well as the Director of Minority, Outreach, Recruitment and Education (MORE) for the Tisch Cancer Institute. Working with community agencies and health organizations, Ms. Jandorf is responsible for bringing cancer education and screening programs to medically underserved communities and recruiting minority residents into on-going research efforts. Ms. Jandorf has received funding from the National Cancer Institute to develop the East Harlem Partnership for Cancer Awareness, a coalition of hospitals, community health centers, and community agencies with the common goal of increasing cancer awareness and thereby preventive care in East Harlem. In addition, Ms. Jandorf has been funded to establish the Witness Project of Harlem, a faith-based breast and cervical education program targeting African American women and Esperanza y Vida, a faith-based breast and cervical education program for Latino families. Ms. Jandorf is an active member of New York State's Cancer Consortium Steering Committee and a member of the steering committee for New York City's Citywide Colon Cancer Control Coalition. Ms. Jandorf has also taken the lead in the Department of Oncological Sciences effort to establish Cancer Family Registries. These databases, specific to cancer site, include both index patients and family members. Ms. Jandorf also directs a number of clinical initiatives exploring new, less invasive ways to screen for colorectal cancer. Lina Jandorf's research efforts are focused on reducing disparities in cancer screening, early detection, and mortality. Her work has been focused on understanding cultural, interpersonal and organizational barriers to cancer screening as well as important association between health disparities and mortality and morbidity.

Elizaveta Efuni has joined the team as a volunteer research affiliate in January 2012. Ms. Efuni received her Master's degree in economics from New York University and has worked for Brooklyn Chamber of Commerce focusing on economic development of New York City underserved areas. Ms. Efuni has also served as a researcher economist assisting in investigation of the reverse wage gap among educated White and Black women. Currently Ms. Efuni is pursuing her post baccalaureate premedical degree at Hunter College CUNY and is planning to pursue the career in medicine. Her research interests include health discrepancies among low-income populations, health promotion and behavior.

Cristina Villagra is the research program coordinator at the Department of Oncological Sciences. Ms. Villagra is a bilingual/bicultural health educator who has been working with Latino community for the past six years. In the current study Ms. Villagra is responsible for managing daily operations, translation of study materials into Spanish language and conducting focus groups. She is also an invited lecturer for the recruitment strategies in NYU Assessing Community Health class. Ms. Villagra holds an M.P.H. degree from New York University and a B.A. in Biology from Rutgers University. The focus of Ms. Villagra's research is patient navigation system in colorectal cancer screening and investigation of cultural barriers and facilitators for screening colonoscopy among low-income Hispanics.

Ms. Cooperman holds a MS degree in Education and a Bachelor degree in History. Currently Ms. Cooperman is pursuing her MD at New York Medical College. With a background in education she has been a public school teacher in diverse Brooklyn and Bronx communities and in 2006 was elected as a teaching fellow to address severe teacher shortages in high-need subjects and locations in NYC. Ms. Cooperman has been involved with Mount Sinai Department of Oncological Sciences since 2010 where she has served as a clinical research coordinator since September 2011. Ms. Cooperman spearheaded the recruitment efforts at gastroenterology specialty clinic for the department's clinical trials in

colorectal cancer prevention, conducted focus groups to refine print intervention materials and supported on-going study needs. Ms. Cooperman research interests include cost effective methods of colorectal cancer screening and health navigation.

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Table 1

Original Brochure Highlights: Culturally targeted educational brochure to increase colorectal cancer screening among underserved Latinos

<p>Specific wording and visual elements meant to draw a Latino audience</p> <ul style="list-style-type: none"> • Title specific to Latinos, “What Latino Men and Women need to know about Colorectal Cancer Screening” • Photographs of Latino faces with a range of ages, gender, and individual versus group photographs • Statistics about CRC incidence and mortality in general and specifically for Latinos • Available in English and/or Spanish
<p>Culturally appealing and relevant messages addressing barriers and facilitators to CRC screening</p> <ul style="list-style-type: none"> • Questions and answers addressing common barriers to screening for Latinos, including cancer fatalism, fear of pain, medical mistrust, fear of cancer • A survivor narrative, “I beat colorectal cancer,” addressing: (1) fear of colonoscopy, fear of cancer and “machismo” as barriers to screening; (2) positive social influence to get screened, giving oneself over to faith and “God’s plan,” the ability to survive a cancer diagnosis (cancer fatalism); (3) importance of screening for all Latinos; (4) the disparity between screening rates of Latinos and other ethnic groups • Messages highlighting the importance of screening in a socio-cultural context: “Take care of yourself so you can take care of your family.”
<p>Simple text and basic information about CRC and colonoscopy for audience of low literacy, low knowledge</p> <ul style="list-style-type: none"> • Information about CRC delivered in an easy-to-read and visually appealing format: including definition of CRC, labeled illustration of the abdominal cavity, illustration of a “colon polyp” and description of how it develops into cancer, information dispelling myths about who is susceptible to CRC and when to get screened • Information about colonoscopy: “Why your doctor has recommended a colonoscopy” (brochure meant to be read by already-referred patients) • Practical information to combat system barriers, such as cost, problems with/lack of insurance; phone numbers provided to call for more assistance

Table 2

Summary of Theoretical Components in a Culturally Targeted Print Intervention and Focus Group Responses

Theoretical Component Targeted	Intervention strategy	Brochure Statements	Brochure Focus Group Responses
Transtheoretical Model and Health Belief Model	<ul style="list-style-type: none"> • Emphasize the benefits of CRC screening • Provide information on common cons/barriers and misconceptions (i.e. pain, cost) • Aim to move decisional balance towards more pros and less cons • Thinking beyond oneself 	<p><u>Cons/Barriers</u> Q: Are screening tests for CRC painful? A: Generally screening tests are painless but there may be some discomfort. Also, during a colonoscopy your doctor gives you a sedative, which is medication to calm and relax you. Q: How will I cover the cost? A: Many insurance plans and Medicare help pay for colorectal cancer screening</p> <p><u>Pros/Benefits</u> • If you are 50 or older, getting a screening test for colorectal cancer could save your life • Screening tests can find colorectal cancer early, when the chance of being cured is good</p> <p><u>Processes of Change</u> • Take care of yourself so you can take care of your family</p>	<ul style="list-style-type: none"> • Preference for more information about colonoscopy being less painful as generally perceived • Suggested adding information for patients with no health insurance • Positive feedback about images of older family members with their children; preference for larger family images • Preference for certain images because they were perceived as happier and more inviting.
Transtheoretical Model and Health Belief Model	Provide information on the importance of early detection of polyps and cancer and its relation to successful treatment	<p><u>Preventability</u> • Screening tests can find and remove polyps at a point before they turn into cancer</p> <p><u>Curability</u> • Screening tests can also find cancer early, when the chance of being cured is good • If everyone 50 or older had regular screening tests, more than half of all deaths from this cancer could be avoided.</p>	<ul style="list-style-type: none"> • Preference for more detailed information about CRC preventability • Preference for additional information about early detection benefits
Health Belief Model and Dual Process Model	Increase perceived susceptibility to CRC by providing relevant statistics and information to the target population	<u>Perceived Risk</u> CRC is the 2 nd leading cause of cancer-related deaths of Hispanics living in this country	Positive feedback about informational content and educational images
Dual Process Model	<ul style="list-style-type: none"> • Alleviate feelings of fear and worry by acknowledging that they are normal and common • Provide positive information on survival rates from early stage CRC 	<u>Fear and Worry</u> Don't let fear be a factor – Among people who found and had their colorectal cancer treated at an early stage, more than 90% survived.	Preference for more information about CRC preventability and curability
Narrative Theory	<ul style="list-style-type: none"> • A survivor story that presents a “recognizable” Latino male character who discusses common barriers to colonoscopy and shares knowledge about screening disparities among Latinos. • Acts as a social role model. 	<ul style="list-style-type: none"> • “I was scared” • “I let my “machismo” get in the way” • “God's desire that we live healthy lives” • “I decided to turn my fear into faith” • “I'm thankful that I got screened, and survived.” • “Unfortunately, right now Latinos get these important tests less often than other ethnic groups”. 	<ul style="list-style-type: none"> • Positive feedback about choice of a male character in the survivor story • Agreed that machismo is a common barrier for CRC screening among Latino males • Agreed that the survivor expresses concerns relevant to Latinos and could be someone they know

Table 3**Focus Group Outline and Questions**

<p>Introductory</p> <p>Let's begin. Where are you from? Where did you grow up? As you know, we're here today to talk about health-related topics, specifically colorectal cancer. Some people believe that illnesses, including cancer, can be prevented.</p> <ol style="list-style-type: none"> What are your thoughts on this? How could cancer be prevented? Does God or a higher power play a role?
<p>CRC Knowledge</p> <ol style="list-style-type: none"> When you hear "colorectal cancer," what do you think? What do you know about colorectal cancer? What do you know about the colorectal cancer screening procedures/method?
<p>Screening determinants: participants <i>without</i> screening history</p> <ol style="list-style-type: none"> Based on our previous conversations, I know that none of you has had a colonoscopy. There are lots of reasons people don't get colonoscopies. <ol style="list-style-type: none"> What might encourage you to get one? And/or, what has prevented you from getting one? Discuss screening determinants such as: fear; medical concerns; influence/encouragement of family and friends; provider lack of referral/recommendation; information- what participants have seen and where, in what format, what would be helpful Do you think: <ol style="list-style-type: none"> People from different countries (such as Puerto Rico or the Dominican Republic) have different views about CRC and or having a colonoscopy? Men and women have different views about having a colonoscopy? People who are more optimistic view having a colonoscopy differently?
<p>Screening determinants: participants <i>with</i> screening history (changes from previous section <i>italicized</i>)</p> <ol style="list-style-type: none"> Based on our previous conversations, <i>I know that everyone here has had a colonoscopy.</i> There are lots of reasons people don't get colonoscopies. <ol style="list-style-type: none"> <i>What/who encouraged you to get one?</i> Discuss screening determinants such as: fear; medical concerns; influence/encouragement of family and friends; provider lack of referral/recommendation; information- what participants have seen and where, in what format, what would be helpful to others, <i>if they knew having a colonoscopy would reduce their risk for CRC and if so, did the information influence their decision to get a colonoscopy?</i> <p>*Question 2 is identical to participants <i>without</i> screening history*</p>
<p>Brochure Layout & Content</p> <ol style="list-style-type: none"> Review of the layout. Do you find it easy to follow as it is presented? Review of the color and picture choices <ol style="list-style-type: none"> How do you feel about the color and picture choices? Are the pictures clear and simple enough to understand? Review of the educational content and survivor narrative. Do you find them informative? <ol style="list-style-type: none"> Is there any term or information that you didn't understand when reading the brochure? Review of motivation <ol style="list-style-type: none"> Do you think the brochure would encourage someone to have a colonoscopy? Is there something more we could say to make the brochure more encouraging? Review of cultural relevance <ol style="list-style-type: none"> Do you think that the brochures are relevant to individuals of diverse Latino backgrounds? Is there any way the brochures be improved to improve their cultural relevance? General Feedback. Is there anything missing? Anything you particularly enjoyed or would like removed?

Summary

We covered some very important topics here today. Is there anything that you'd like to talk about that didn't come up today or something on which we didn't spend enough time?