



Published in final edited form as:

J Cancer Educ. 2014 December ; 29(4): 781–789. doi:10.1007/s13187-014-0654-6.

Understanding the patient-provider communication needs and experiences of Latina and non-Latina White women following an abnormal mammogram

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Abstract

Latinas are more likely to delay recommended follow-up care than non-Latina White (NLW) women after an abnormal mammogram result. Ethnic differences in communication needs and experiences with healthcare staff and providers may contribute to these delays as well as satisfaction with care. Nonetheless, little research has explored the aspects of communication that may contribute to patient comprehension, adherence to follow-up care, and satisfaction across ethnicity. The purpose of this exploratory, qualitative study was to identify patients' communication needs and experiences with follow-up care among Latina and NLW women who received an abnormal mammogram. We conducted 41 semi-structured interviews with 19 Latina and 22 NLW women between the ages of 40 and 74 who had received an abnormal mammogram. Communication themes indicated that women's needs and experiences concerning abnormal mammograms and follow-up care varied across ethnicity. Latinas and NLW women appeared to differ in their comprehension of abnormal results and follow-up care as a result of language barriers and health literacy. Both groups of women identified clear, empathic communication as being important in patient-provider communication; however, Latinas underscored the need for warm communicative styles and NLW women emphasized the importance of providing more information. Women with high levels of satisfaction with patient-provider interactions appeared to have positive perspectives of subsequent screening and cancer treatment. To improve patient satisfaction and adherence to follow-up care among Latinas, educational programs are necessary to counsel healthcare professionals with regard to language, health literacy, and empathic communication needs in healthcare service delivery.

Keywords

abnormal mammogram; disparities; Latina; communication; breast cancer screening; follow-up; qualitative; patient interactions

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Introduction

Latina women are disproportionately affected by breast cancer in the United States (U.S.). Although incidence rates of breast cancer are lower relative to non-Latina Whites (NLW; 92.3 and 122.3 per 100,000) [1], Latinas are at greater risk for late stage detection [2], larger tumor sizes [3], and breast cancer-specific mortality [4]. These differences are partially attributable to disparate experiences during breast cancer prevention and care. Mammography screening is underutilized by Latinas [5]; barriers to mammography have been explored extensively [6] and have been the focus of breast cancer interventions for U.S. Latinas [7]. Other critical stages of the breast cancer care continuum have been less addressed. For example, Latinas who receive an abnormal result have delayed adherence to follow-up care recommendations compared to NLW [8, 9], which may lead to treatment delays [10] and poorer survival odds [11]. One key contributing factor to receipt of timely follow-up care that has received little attention is communication with healthcare staff and providers, including women's needs and experiences with patient-provider interactions and factors that shape positive interactions with their providers [12].

Extant literature concerning communication following an abnormal mammogram has largely focused on language barriers and low health literacy in relation to comprehension of results and receipt of follow-up care [12-15]. Previous research that has examined the relationship between these factors has been largely quantitative [15, 13, 12]. Less is known as to *how* patient-provider communication may impact comprehension and receipt of follow-up care. Simultaneously, much research has focused either on receipt of results [13, 14] or follow-up care appointments [15]. The one existing qualitative study [12] which explored the entire abnormal mammogram experience described the roles of language and health literacy concerning satisfaction with receipt of results, but failed to delve into how these factors influence scheduling of appointments as well as comprehension and satisfaction with follow-up care. Another major gap in extant literature is the role of interpersonal communication in patient satisfaction following an abnormal mammogram. Such information is important for continued mammography use among women not diagnosed with cancer [16] and may also influence perceptions of and adherence to subsequent care among women diagnosed with cancer. Finally, it is important to assess communication among both Latinas and NLW to determine communication needs that are universal across ethnicity or unique to develop appropriate educational materials for healthcare providers. Health literacy, for example, may be an important universal factor for comprehension and satisfaction with care for both NLW and Latina women who receive an abnormal mammogram result. There may also be unique differences in communication needs and experiences among Latinas and NLWs due to cultural norms, practices, and values [17].

This study attempts to address these gaps in the literature. Using a qualitative approach, we identify the similarities and differences in communication needs and experiences of Latinas and NLW during the abnormal mammogram experience, from the time women receive results to their follow-up appointments to their encounter with providers for follow-up care. We further consider communication in relation to patient satisfaction and perceptions concerning quality of care. Finally, we present preliminary findings concerning the

experiences for women diagnosed and not diagnosed with breast cancer on perceptions of subsequent breast healthcare.

Method

Recruitment

Between February and September of 2012, women were recruited from two mobile mammography services affiliated with the local National Breast and Cervical Cancer Early Detection Program (NBCCEDP) grantee program (BLINDED FOR REVIEW) through mailed recruitment materials and information about the study provided during their initial appointment. Women were eligible for the study if they 1) self-identified as being Hispanic/Latina/Chicana or White/Caucasian; 2) were between 40-74 years old; 3) had received an abnormal mammogram within the past four years; and 4) had no previous personal history of breast cancer. All women received follow-up care at private hospitals affiliated with the mobile mammography services and were interviewed within 3 months of receipt of abnormal results. Among these women, the average days to interview were 27.15. We used a qualitative, iterative constant comparison approach to data analysis in which interview data were compared to data and emergent themes of successive interviews [18]. Data from initial interviews suggested that respondents' communication needs were not unique to this specific period of time (i.e., 2012), but could also be prevalent themes in ethnic differences among women who had received abnormal results in previous years. Given this, recruitment was expanded to include women who had received an abnormal mammogram within four years to confirm these preliminary findings. Notably, the other study that examined experiences during both receipt of results and follow-up care was published within four years of our study [12]. This additionally allowed us to examine perceptions of subsequent breast healthcare following receipt of an abnormal mammogram. Mailed letters of approach to eligible women were distributed among the NBCCEDP program's NLW and Latina clients. NBCCEDP patients in large part received care from the same mobile mammography services and follow-up care within the same or similar affiliated private hospitals. Women were interviewed within 4 years of receipt of abnormal results. Among these women, the average time to interview was two years following receipt of abnormal results. There were equivalent proportion of Latinas and NLWs across the different mammography services, $p = 0.50$.

Qualitative data collection and analysis

The research team developed a semi-structured interview guide based on the study's research questions concerning communication needs and experiences. The interview guide was translated from English into Spanish and back-translated into English by two translators. One bilingual and bicultural interviewer administered face-to-face in-depth interviews in the participant's language of choice, either English (22 NLWs, 3 Latinas) or Spanish (16 Latinas). Interviews took place in a location preferred by the participant, either in participant homes, at the researcher's office at the academic institution, or in public settings (i.e., libraries, coffee shops). Each audio-recorded interview lasted 60-90 minutes. Participants signed an informed consent and received a check for \$25. The project was approved by the Institutional Review Board at BLINDED FOR REVIEW.

We used qualitative principles of constant comparison to guide our analysis [18]. Emerging themes were identified and discussed from audio-recordings immediately following interviews in order to inform successive interviews. Interviews were then transcribed verbatim, checked for accuracy, and translated from Spanish to English. Transcripts were uploaded into ATLAS.ti version 7 (Berlin, Germany). Three authors independently read each transcript, applying an inductive analysis approach, in which meaning and themes were identified from raw interview data. The team generated preliminary codes to capture the essence of each idea, compared notes, then reviewed the data and clustered similar ideas together into categories representative of each emergent theme. All coders met to review the codes and discuss areas of disagreement and to reach an agreement.

Results

Demographic characteristics by ethnicity are reported in Table 1. Latina participants were less educated and more often uninsured than NLWs. Over 50% of Latina participants did not speak English and only 16% were born in the United States.

Timing of experience and medical procedures obtained prior to the interview

The timing of the abnormal mammogram experience relative to the interview as well as the types of medical procedures received can be found in Table 1 by ethnicity. Among women who were recruited through mobile mammography services, days between the receipt of the result and the interview were comparable across ethnicity, $p = 0.94$. The majority of Latina (74%) and NLW women (86%) had scheduled and received follow-up care by the time of the interview, although Latinas exhibited longer time to follow-up relative to NLW counterparts, $p = .04$. There were no significant differences in receipt of procedures across ethnicity; all women who had a follow-up appointment experienced diagnostic mammography (16 Latina, 21 NLW), 15 received ultrasounds (10 Latina, 5 NLW), and 4 received a type of biopsy (3 NLW, 1 Latina). Among women recruited through mobile mammography services, 19 of 29 women had a diagnosis within three months. Diagnoses were comparable across ethnicity: sixteen women obtained a negative result or benign-noncancerous finding (8 NLW, 8 Latina) and three women had a finding that was probably benign, but required short-term follow-up (1 NLW, 2 Latina). Among women who were recruited through NBCCEDP services, Latinas had longer time periods between the abnormal mammogram experience and the interview, $p = .05$. Three women were diagnosed with benign breast conditions that required surgery (2 Latina, 1 NLW), and two women were diagnosed with malignant breast cancer (1 Latina, 1 NLW). For the two women diagnosed with invasive breast cancer, interviews were conducted two and four years after diagnosis for the NLW and Latina patients respectively.

Communication needs and experiences

Themes around communication needs and experiences are described chronologically from the time women received results to their follow-up appointments to their encounter with providers for follow-up care. The type and frequency of themes concerning receipt of results, scheduling, and follow-up care/diagnostic procedures did not differ among women recruited through mobile mammography services and NBCCEDP services. Important ethnic

differences were found throughout the experience: language, health literacy, and empathic communication emerged as important communication needs related to patients' experiences and satisfaction with the care received.

Preferred information content and communication channel of abnormal results

Ethnic differences in communication needs initially emerged when women received notification of abnormal mammogram results. All women received a mailed letter sent by mammography services. NLW women said sending a letter was an appropriate way to communicate information about abnormal mammogram results. They asserted that the letter provided clear instructions about making a follow-up appointment, as illustrated by this NLW respondent:

“The letter seemed fine to me. It didn't alarm me. It just. You know, ‘We saw something and we'd like to take a second look at it.’ I think it was fine.”

Latinas reported that the practice of disclosing mammogram results via mail lacked empathy as did the content of the letters:

“I don't think they should send you a letter...you don't know the socio-emotional situation of that person. How would you like bad news – with paper? Would you like your boyfriend to tell you in a letter ‘We're finished’?”

“[The letter said] it went badly and I need to go to the doctor again. For Latinos... they say it too harshly, they say it in a quick attack. For the Latinos, it's necessary to give them, more softly, the news, with more words, more amicably, giving support.”

More NLWs than Latina women recalled that staff from their primary care also communicated results by phone or e-mail. Women of both ethnicities said phone calls provided women with reassurance, as described by this NLW woman:

“I like the fact that I got the personal touch. They called before they sent the letter.... To me, that is more personable...It made me feel better about going to this.”

Ethnic differences in comprehension of results

When women were asked to describe their reaction to the communication of results, NLW respondents specifically referenced text in the letter they received and said the information was clear and did not cause alarm. One respondent rationalized:

“It says there [points to letter] it doesn't mean I have cancer. They even say it: most cases are normal.”

In contrast, Latinas in general indicated they did not fully understand the results letter or the subsequent action required of them, including the need to schedule a follow-up appointment. Spanish monolingual Latina women, all of whom were literate and proficient in Spanish, reported feeling frustration after receiving multiple letters in English, as described by this participant:

“I had my mammography done, and I was satisfied. But the problem was after that. I began to receive papers and couldn't read them.”

Latinas who had difficulty understanding the letter written in English relied on family members to decipher the words, as exemplified by this respondent:

“Because [the letter] came in English, I called my husband, and he said, ‘Well it's that they need to do another mammogram....that's why you have to go to [the clinic].’”

For Latinas who overcame language barriers, comprehension remained a challenge. Many times, proficiency with the English language and high health literacy were necessary skills for patients to understand the meaning of the letter. Letters of abnormal results instructed patients to make a follow-up appointment, but some Latinas said they were confused about why they were asked to return for another exam. One Latina remarked:

“They didn't say why [I needed to return to the clinic]. All [the letter] said was the results were inaccurate.”

Follow-up appointments: communication needs in scheduling

The ethnic differences in time to follow-up described in Table 1 may have been related to language and health literacy barriers when receiving mailed communication and/or when attempting to schedule appointments. Latinas who had not scheduled appointments often discussed language barriers during phone conversations to schedule appointments, as indicated by this respondent:

“They don't have someone that speaks Spanish so I can explain myself better. I can call to make an appointment but I wouldn't know how to explain the reason why I need to make the appointment.”

Others did not comprehend why they were waiting to schedule appointments, as described by this Latina:

“They said, ‘We will need to get the results from last year so we can compare it’...I gave them the information that I remember, I had. And so far I haven't heard anything. I don't know if they found the information or if they want more information from me. I'm not sure what they did.”

Conversely, NLW respondents who had not scheduled appointments noted plans to schedule appointments soon or had appointments to discuss results with their primary doctors. One NLW respondent explained:

“With it being just 2 weeks, I think it's still soon enough that I can get it taken care of and go on from there.”

Communication needs during follow-up appointments

Among women who received follow-up care, diagnostic delays were not discussed in relation to subsequent needs and experiences during follow-up visits. Nonetheless, similar needs and experiences were described in the context of the appointment itself. NLW and Latina women identified similar needs for detailed, empathic communication during patient-

provider interactions. However, ethnic-specific communication needs and experiences also emerged. NLWs valued when providers thoroughly explained the multiple clinical procedures—such as additional mammograms, ultrasounds, biopsies, lumpectomies or mastectomies—that the women either did or were likely to undergo. Additionally, during interviews, NLW women were able to describe their experiences and clinical procedures by repeating medical language used by their providers:

“[The doctor] scheduled me for a needle biopsy and they tried to aspirate it...My breast tissue was so dense...I went in for a lumpectomy...They took out a third of my mammary glands.”

“I looked at the film and I thought, ok, well maybe a lumpectomy...I felt that it if was lower in my breast, that it would be more disfigurement and that maybe it'd lead to a mastectomy.”

NLW respondents said they most appreciated providers who could deliver clear health information and demonstrate empathy. This NLW respondent noted:

“They were super caring. They were very attentive... It definitely made me feel better... The ultrasound tech...is explaining everything really clearly as she went on and I really appreciated that.”

While only a few NLW respondents said they had difficulty understanding the information provided, many Latinas described compounded communication challenges due to language barriers and limited health literacy. The majority of Latinas with limited English proficiency said they received professional interpreter services during the follow-up appointment. Nonetheless, Latinas such as this one underscored the need for more bilingual staff to support the healthcare team:

“When Latinas received a bad news, I think you should support them with a person in their language...someone who could help you understand what is going on or what will happen to you during the treatment? And if they say, ‘You know what? You have cancer.’ Okay, that is inevitable now, but someone in your language to tell you, ‘These are the steps to follow. You have the option of having chemotherapy and the option of radiotherapy and these other options’ and talk with a patient about all the risks.”

Other respondents emphasized how language barriers compromised the quality of communication:

“Well, one doesn't speak English so well. So sometimes, one says, ‘I don't speak English, how am I going to make (ask) the questions.... I need someone who speaks Spanish.’ Find someone so we can understand better what they are going to explain to us.”

In addition, Latinas such as this respondent said they wished providers would use simpler language to communicate with patients, as illustrated by this Latina respondent:

“Well, it's that...they explain so...in their highly educated language. But that they [should] also explain in the language of a person who doesn't have the vocabulary from those levels of education.”

Latinas reported that lack of Spanish language resources made it difficult to understand complex medical information and compromised the quality of their communication with their provider. In contrast to NLWs, Latinas less often used specific medical language to describe their experiences during the follow-up appointment, a theme illustrated by this respondent:

“[Healthcare staff] tried to give me an interpreter so I could understand all the processes they were going to do me...[the nurse] told me, ‘I will give it to the doctor now, the results and they will see if you need to have an’— something with the stomach, something (referring to an ultrasound).”

Despite barriers to comprehension, Latina respondents did not discuss the provision of clear information as a requisite for a positive follow-up appointment experience. Instead, they highlighted their need for empathic care providers who demonstrate, through their tone of voice and body language, a patience and willingness to spend time with patients. Recommendations concerning how to communicate to patients often included a need for empathy for Latinas, as indicated by this respondent's suggestion:

“There are many doctors who are very compassionate and they tell us that they have found something but that we shouldn't be worried. They should tell us things that can calm us down, because there are many doctors who just give you the result and that's it. Many times the difference lies in the way they communicate what is happening to you...I think that they should be more compassionate.”

The influence of an abnormal mammogram experience on treatment and subsequent screening

Both NLW and Latina women noted the abnormal mammogram experience influenced their perceptions of subsequent breast healthcare. For NLW and Latina patients diagnosed with breast conditions who were satisfied with initial follow-up care, the abnormal mammogram was the first of many steps through treatment in a supportive environment. One NLW cancer patient noted:

“It felt like it was the mode of operation...the mammogram. Then the next step is the ultrasound. The next step is the biopsy. Then the next step is potentially if you have surgery...so it feels like almost a step-by-step program.”

Conversely, both Latina and NLW women emphasized situations wherein they advocated for themselves if they had undergone challenging interactions with providers during diagnostic procedures. This often manifested in decisions to change providers or to request alternate staff for their care, as typified by this Latina respondent:

“I don't want to go with the same person, she hurt me a lot [during the biopsy]... and they sent me with another person.”

Latina and NLWs who were not diagnosed with a breast condition also noticed a change in their perceptions of mammography and healthcare providers. Women with negative experiences reported subsequent medical mistrust, as illustrated by this NLW respondent:

“So, I guess basically I don't trust them [doctors]...There's just so much to know and they're really limited and they're not good at acknowledging what they don't know.”

Similarly, a Latina noted:

“You keep...not going to the doctor...because you didn't trust the doctor.”

Women who had positive experiences emphasized that the abnormal mammogram experience taught them the importance of early detection for themselves and others, as this Latina reported:

“A mammogram is cheaper than chemotherapy. So when I go to a place, I try to encourage women about the importance of this checkup.”

Discussion

Needs, experiences, and satisfaction with care were examined among a sample of Latina and NLW women who were recommended for follow-up care after abnormal mammogram results. Ethnic differences emerged in comprehension of results and care; simultaneously, positive experiences with follow-up care appeared to differ among Latina and NLW women. The accounts of women in this study corroborate with previous research concerning language and health literacy [14, 12, 15, 13]; this study provides additional information concerning how language and health literacy intersect from receipt of results to the follow-up appointment itself. The findings regarding empathic communication are consistent with previous literature regarding norms, preferences, and values present in Latin American culture concerning the importance of warm, strong interpersonal relationships [17-19]. Finally, our work suggests there may be long-term benefits to positive patient-provider communication during the abnormal mammogram experience.

Consistent with previous work [12, 14, 13, 15], language barriers were associated with patient comprehension for Latinas. Findings demonstrate how language barriers can hinder comprehension of the clinical care process and subsequent adherence to recommendations as well as increase frustration and dissatisfaction with care. Language barriers often resulted in Latinas in this sample experiencing more frustration upon receipt of English-only results; some of this frustration can be understood in the context of having to wait for assistance from family/friends with translation. Frustration and the social demands placed on limited English proficient patients (e.g., disclosure of results to obtain translation) may have affected women's satisfaction as well as decisions with regard to how to proceed. Such findings have important implications, as a high proportion of mammography services throughout the United States deliver mammography results solely in English [20]. Language barriers further negatively impacted experiences of Latinas when interacting with staff before and during the appointment itself. Linguistic difficulties not only influenced patient comprehension, but also influenced patients' ability to communicate their needs and questions effectively.

Language appeared to interact with health literacy. The majority of NLW respondents showed greater comprehension throughout the abnormal mammogram experience, including

information in the letter and during appointments. The lower levels of health literacy observed among this specific sample are congruent with other literature indicating the importance of addressing health literacy in health communication and education among this population [21]. Findings further show the intricacy of the relationship between health literacy and language barriers. For example, one aspect of this relationship may pertain to receipt of complex information through a secondary source. Latinas who understood the message through translation from lay resources or using their own language abilities remained confused about the diagnostic procedures and, for those diagnosed with cancer patients, about the treatment received. Our findings are consistent with previous literature that has indicated adverse potential consequences of reliance on lay interpreters, including non-adherence [22]. During the appointment, Latinas less often named specific procedures to explain findings relative to NLW counterparts, despite the presence of a professional interpreter. Future research concerning the dynamics among English limited patients, interpreters, and providers may be helpful to elucidate this interaction between language and health literacy in order to increase the quality of care for diverse populations.

In addition to language and health literacy, empathy and emphatic communication by the healthcare provider was a universally important aspect of communication among Latinas and NLW women. Previous studies suggested that healthcare staff disrespect can influence decisions to schedule follow-up care [12]; our research helps us understand the aspects of interpersonal interaction between the patients and healthcare staff /providers that are conducive to patient satisfaction. These results underscore the need to understand the components and aspects of empathic communication that can be modeled in order to train healthcare providers, particularly when disclosing abnormal results and providing follow-up care. Notably, NLW women who were satisfied with their experiences often discussed empathic communication, but emphasized the importance of clear information, suggesting this is an integral aspect of quality care for this population. Conversely, empathic communication itself appeared to be particularly salient for Latinas. Further research explicitly addressing cultural norms, beliefs, and practices is warranted to determine how specific values may influence patient needs and experiences with regard to informational and empathic aspects of communication.

The ethnic differences documented in this study have important implications for follow-up care adherence and subsequent breast cancer-related care. Our findings and other research [8, 9] have documented delays in time to follow-up for Latinas relative to NLWs. Language and health literacy may have resulted in lower comprehension of mailed results and lags in follow-up care; as well, delays in time to follow-up may have influenced communication needs and experiences, but these relationships could not be directly studied with our qualitative methods. Future research is warranted to determine how and at what point communication is associated with adherence and how it might be improved. As well, whereas both groups of women used the same mammography services, there were likely ethnic differences in PCPs. Differences in PCP services was observed with regard to delivery of results and the modes of communication used. Future work concerning communication with PCPs and mammography staff may illuminate the role of coordination of care in ethnic disparities. Finally, our preliminary findings suggest that positive interactions during the abnormal mammogram experience have long-term consequences

with regard to perceptions of treatment for women diagnosed with breast conditions and to perceptions of mammography for women with normal or benign findings. Women with positive experiences were more likely to discuss a supportive environment as they underwent treatment as well as positive perceptions of regular, mammography screening. Conversely, challenging experiences appeared to result in medical mistrust and dissatisfaction, which has is concurrent with previous studies concerning non-adherent women with a history of mammography use [16]. These data serve as preliminary evidence to suggest the importance of educational interventions to improve care after receipt of an abnormal mammogram as well as patient perceptions in subsequent breast cancer-related healthcare.

This study had several limitations. This study focused on the role of interpersonal communication; nonetheless, multiple factors contributing to ethnic disparities in follow-up care adherence [23, 24]. In this sample, Latinas had lower educational attainment and were less likely to have insurance; these factors as well as other significant life conditions and societal disadvantage have been associated with diagnostic delays and may also have influenced communication needs and experiences. Further work is warranted to understand, for example, the ways in which factors such as education may influence language and health literacy in the context of breast cancer care and consequently differences in patient adherence. The current study has a small convenience-based sample of women that may not be representative of all Latina or NLW women. The current study sought to confirm emerging themes experienced by women who received an abnormal mammogram result in 2012 to women with similar experiences across other years; nonetheless, the timing between the experience and the interview may have resulted in recall bias for women recruited through the NBCCEDP services. Subsequent experiences with breast healthcare (e.g., screening, treatment) may have influenced their memory of the abnormal mammogram experience. Furthermore, there were differences in time to interview across ethnicity, which may have influenced perspectives. Several socio-demographic differences also emerged, including lower socio-economic status among Latinas. We were unable to collect specific information concerning the stage and type of breast cancer among women, which may certainly would influence the type of treatment recommended and may have influenced patients' needs and experiences with healthcare staff. Further work with a rigorous matching design by ethnicity and a greater number of women across different time periods since the abnormal experience and with different diagnoses may be helpful.

Conclusions and Implications

Our findings suggest language and health literacy are implicated in ethnic differences in the abnormal mammogram experience. Respondents indicated the importance of informational as well as empathic communication. The preference for empathic communication among Latinas is concurrent with cultural values placed on strong, interpersonal relationships. Clinics may consider multilingual telephone calls in addition to letters. Empathic communication should be implemented to increase satisfaction and potentially adherence. Future communication planning should seek not only to have bilingual resources, but to have resources which may be understood by populations varying in general educational attainment. Existing cultural competence programs for healthcare professionals may

continue to focus on discussions concerning language barriers and may additionally incorporate segments concerning the interaction of language and health literacy for vulnerable patient populations as well as the need for empathic communication.

Acknowledgments

The authors would like to thank Noah Espinoza for technical support. The current project was funded in part by multiple National Institutes of Health/National Cancer Institute grants (P50CA148143, R25CA92408) and Fred Hutchinson Cancer Research Center Faculty Development Funds. The opinions or assertions contained herein are the private ones of the authors and are not considered as official or reflecting the views of the National Institutes of Health.

References

1. American Cancer Society. Cancer Facts & Figures 2012 - PDF Brochure. 2012. <http://www.cancer.org/acs/groups/content/@epidemiologysurveillance/documents/document/acspc-031941.pdf>. Accessed: February 5th, 2012
2. Siegel R, Naishadham D, Jemal A. Cancer statistics for Hispanics/Latinos, 2012. *CA: A Cancer Journal for Clinicians*. 2012; 62(5) n/a-n/a. 10.3322/caac.21153
3. Miller BA, Hankey BF, Thomas TL. Impact of sociodemographic factors, hormone receptor status, and tumor grade on ethnic differences in tumor stage and size for breast cancer in US women. *American Journal of Epidemiology*. 2002; 155(6):534–545.10.1093/aje/155.6.534 [PubMed: 11882527]
4. Ooi SL, Martinez ME, Li CI. Disparities in breast cancer characteristics and outcomes by race/ethnicity. *Breast Cancer Research and Treatment*. 2011; 127(3):729–738.10.1007/s10549-010-1191-6 [PubMed: 21076864]
5. Smith RA, Cokkinides V, Brawley OW. Cancer screening in the United States, 2012. *CA: A Cancer Journal for Clinicians*. 2012; 62(2):129–142.10.3322/caac.20143
6. Austin LT, Ahmad F, McNally MJ, Stewart DE. Breast and cervical screening in Hispanic women: A literature review using the Health Belief Model. *Women's Health Issues*. 2002; 12:122–129. [PubMed: 12015184]
7. Molina Y, Thompson B, Espinoza N, Ceballos R. Breast cancer interventions serving US-based Latinas: Current approaches and directions. *Women's Health*. 2013; 9:335–350.
8. Press R, Carrasquillo O, Sciacca RR, Giardina EG. Racial/ethnic disparities in time to follow-up after an abnormal mammogram. *J Womens Health (Larchmt)*. 2008; 17(6):923–930.10.1089/jwh.2007.0402 [PubMed: 18554094]
9. Ramirez AG, Pérez-Stable EJ, Penedo FJ, Talavera GA, Carrillo JE, Fernandez ME, Holden AEC, Munoz E, San Miguel S, Gallion K. Navigating Latinas with breast screen abnormalities to diagnosis. *Cancer*. 2013; 119(7):1298–1305.10.1002/cncr.27912 [PubMed: 23233265]
10. Ashing-Giwa KT, Gonzalez P, Lim JW, Chung C, Paz B, Somlo G, Wakabayashi MT. Diagnostic and therapeutic delays among a multiethnic sample of breast and cervical cancer survivors. *Cancer*. 2010; 116:3195–3204. [PubMed: 20564623]
11. Niederdeppe J, Levy AG. Fatalistic beliefs about cancer prevention and three prevention behaviors. *Cancer Epidemiol Biomarkers and Prevention*. 2007; 16:998–1003.
12. Allen JD, Shelton RC, Harden E, Goldman RE. Follow-up of abnormal screening mammograms among low-income ethnically diverse women: Findings from a qualitative study. *Patient Education and Counseling*. 2008; 72:283–292. [PubMed: 18490127]
13. Mojica CM, Bastani R, Ponce NA, Boscardin WJ. Latinas with abnormal breast findings: Patient predictors of timely diagnostic resolution. *Journal of Women's Health*. 2007; 16:1468–1478.
14. Karliner LS, Kaplan CP, Juarbe T, Pasick R, Pérez-Stable EJ. Poor patient comprehension of abnormal mammography results. *Journal of General Internal Medicine*. 2005; 20(5):432–437.10.1111/j.1525-1497.2005.40281.x [PubMed: 15963167]

15. Mojica CM, Bastani R. Receipt of diagnostic tests for breast cancer: Validity of self-reports among low-income, mostly Latina, indigent women. *Evaluation and Health Profession*. 2010; 33:437–451.
16. Moy B, Park ER, Feibelmann S, Chaing S, Weissman JS. Barriers to repeat mammography: cultural perspectives of African-American, Asian, and Hispanic women. *Psycho-Oncology*. 2006; 15:623–634. [PubMed: 16304623]
17. Marin, G.; VanOss Marin, B. *Research with Hispanic populations*. Sage Publications; Newbury Park, CA: 1991.
18. Miles, MB.; Huberman, AM. *Qualitative data analysis: A methods sourcebook*. Thousand Oaks, CA: Sage Publications; 2013.
19. Elder JP, Ayala GX, Parra-Medina D, Talavera GA. Health communication in the Latino community: issues and approaches. *Annual Review of Public Health*. 2009; 30:227–251.
20. Marcus EN, Koru-Sengul T, Miao F, Yepes M, Sanders L. How do breast imaging centers communicate results to women with limited English proficiency and other barriers to care? *Journal of Immigrant and Minority Health*. 2013;1–8.10.1007/s10903-012-9771-7 [PubMed: 22307545]
21. Kreps GL, Sparks L. Meeting the health literacy needs of immigrant populations. *Patient Education and Counseling*. 2008; 71:328–332. [PubMed: 18387773]
22. Flores G. Language barriers to health care in the United States. *New England Journal of Medicine*. 2006; 355:229–231.
23. Taplin SH, Yabroff R, Zapka JM. A multilevel research perspective on cancer care delivery: The example of follow-up to an abnormal mammogram. *Cancer Epidemiology, Biomarkers, & Prevention*. 2012
24. Zapka J, Taplin SH, Price RA, Cranos C, Yabroff R. Factors in quality care—The case of follow-up to abnormal cancer screening tests—problems in the steps and interfaces of care. *JNCI Monographs*. 2010; 2010(40):58–71.10.1093/jncimonographs/lgq009

Table 1
Socio-demographic and mammography-based characteristics (n= 41)

Variable	Latina (n = 19)	NLW (n = 22)
	Mean (Standard Error)	Mean (Standard Error)
Age	49.68 (1.41)	51.77 (1.31)
Days to follow-up ^{I*}	30.50 (19.26)	14.83 (8.89)
Days between receipt of results and interview (mobile mammography services) ^I	26.79 (23.16)	27.54 (18.24)
Years between abnormal mammogram experience and interview (NBCCEDP services) [*]	2.92 (1.56)	1.31 (0.66)
	<i>n (%)</i>	<i>n (%)</i>
U.S.-born ^{***}	3 (16)	22 (100)
English-speaking ^{***}	8 (42)	22 (100)
High school graduate [*]	10 (52)	4 (18)
Household income		
<\$10,000	6 (32)	6 (27)
\$10-30,000	13 (68)	8 (36)
>\$30,000	0 (0)	8 (36)
Unemployed	8 (42)	8 (36)
Uninsured ^{***}	18 (95)	12 (55)
% attended a follow-up appointment		
Before interview	14 (74)	19 (86)
Within 365 days	16 (84)	21 (95)
Diagnostic procedures received		
Diagnostic mammography	16 (84)	21 (95)
Ultrasounds	10 (63)	17 (90)
Biopsies	6 (38)	10 (53)

^I Information provided for women who were interviewed within 3 months of receipt of results (14 Latina, 15 NLW).

* $p < .05$,

** $p < .01$,

*** $p < .001$