



Published in final edited form as:

J Community Health. 2012 April ; 37(2): 335–343. doi:10.1007/s10900-011-9450-y.

Assessing the awareness of and willingness to participate in cancer clinical trials among immigrant Latinos

Sherrie Flynt Wallington, PhD [Assistant Professor],

Georgetown University School of Medicine & Lombardi Comprehensive Cancer Center

Gheorghe Luta, PhD [Assistant Professor],

Georgetown University School of Medicine & Lombardi Comprehensive Cancer Center

Anne-Michelle Noone, MS [Biostatistician],

Georgetown University School of Medicine & Lombardi Comprehensive Cancer Center

Larisa Caicedo, MA [Director],

Nueva Vida, Incorporated

Maria Lopez-Glass, Ph.D. [Assistant Professor],

Georgetown University School of Medicine & Lombardi Comprehensive Cancer Center

Vanessa Sheppard, PhD [Assistant Professor],

Georgetown University School of Medicine & Lombardi Comprehensive Cancer Center

Cherie Spencer, MS [Information Specialist], and

Howard University Cancer Center

Jeanne Mandelblatt, MD, MPH [Professor]

Georgetown University School of Medicine & Lombardi Comprehensive Cancer Center

Abstract

Objective—There is a paucity of data on determinants of clinical trial participation in the growing and diverse US Latino population. We describe correlates of awareness of and willingness to participate in clinical trials among Central and South American Latinos using safety net clinics.

Methods—We conducted an interviewer administered, Spanish language cross-sectional survey (n=944). Logistic regression was used to assess effects of health information sources and psychosocial variables on awareness of clinical trials and intention to participate in clinical trials.

Results—While only 48% knew what a clinical trial was, when explained, 65% indicated a willingness to participate in a trial. Providers were the most common source of general health information. Use of Internet for health information ($OR = 2.33$, 95% CI 1.63, 3.34, $p = .001$), trust in health information ($OR = 1.33$, 1.12, 1.58 for each one unit increase, $p = .001$) and higher education each independently increased the odds of clinical trial awareness, but obtaining information from providers did not. Contacting the Cancer Information Service ($OR = 2.49$, 95% CI 1.01, 6.14, $p = .05$) and psychosocial factors (e.g., greater worry, higher self-efficacy and trust in information) were each independently associated with intent to join a clinical trial but demographic factors were not.

Conclusions—Several information channels, including the Internet and telephone call centers appear to be effective in conveying information about clinical trials. While providers were cited as the most common source of health information, this source was not associated with clinical trial knowledge or intent to participate in trials suggesting a missed opportunity for communication to this immigrant Latino population.

Keywords

Clinical trial awareness; clinical trial participation; Latinos; mass media

Introduction

Clinical trials are considered the gold standard of evidence about the efficacy of cancer prevention, early detection or treatment interventions. Broad representation of all segments of the intended target populations should be included in these trials to ensure that results translate into population effectiveness. However, only 3% of U.S. adult cancer patients participate in clinical trials, ⁽¹⁾ and enrollment is even lower for minorities. ^{(2), (3)} This is particularly true for Latinos, the fastest growing and largest minority group in the U.S. Latinos currently comprise 15.4% of the population ^{(4), (5)} and are projected to represent 25% of the US population by 2050. Cancer is the second leading cause of death in Latinos ⁽⁶⁾ but they comprise only 2–3% of enrollees in cancer clinical trials ^{(5), (7)}.

Among the U.S. general population, higher levels of education, awareness of clinical trials, physician referrals, and positive beliefs about the balance of benefits and risks of research are associated with trial participations ⁽⁸⁾. However, less is known about clinical trial participation in Latinos ⁽⁹⁾. It appears that limited Latino patient-provider communication, difficulties in accessing health care and lack of awareness are related to lower enrollment in trials among Latinos. ^{(10), (11)} Interestingly, when aware of or offered participation in clinical trials, Latinos enroll at the same rates as non-Latino Whites ^{(10), (9), (12)}. Most of this nascent body of literature on clinical trial participation among Latinos has focused on those of Mexican ancestry.

We present data from a cross-sectional survey of immigrant Central and South American Latinos using safety net clinics to assess information channels for, and correlates of clinical trial awareness. We hypothesized that: 1) greater Spanish language media use and internet use would each be independently associated with clinical trial awareness, and 2) psychosocial factors, such as higher perceived risk of, or worry about cancer, greater self-efficacy in information gathering and trust in medical information, would also be independently associated with clinical trial awareness and willingness to participate in trials after considering covariates. These data are intended to inform future interventions to increase enrollment of broader populations of Latinos in future cancer clinical trials.

Materials and Methods

This study was designed to evaluate the information needs, information seeking styles and cancer knowledge of Latinos in the DC metropolitan area. This research was conducted as part of the National Cancer Institute-funded Latin American Cancer Research Coalition (LACRC). All study procedures were approved by the participating Institutional Review Boards.

Setting—This study was conducted in nine safety net LACRC partner community clinics. The clinics provide services primarily to Latinos on a slide-scale fee; several are federally funded community health centers.

Population—We randomly selected a cross-sectional age- and gender-stratified quota sample of individuals attending the LACRC clinics between June 2007 and November 2008. In each site, we enrolled 25 participants of each gender from four age categories: 21–29, 30–39, 40–54, and 55+. Quota sampling was used to be able to compare age and gender groups.

Eligible participants included patients or individuals accompanying a registered patient, self-identified as Latinos, 21 years old and not enrolled in the Women Infants and Children (WIC) program. We also enrolled a small convenience sample of Latinos attending health fairs sponsored by the LACRC clinics. We obtained informed consent (in Spanish) from all participants; each participant received a \$10 gift card for their time.

There were a total of 1482 surveys completed. We excluded those with unknown region of birth (n=86) or the small number born outside of Central and South America (n=1 from Congo, 1 from Spain, and 43 from the Caribbean), leaving 1351 available for analysis. Of the analytic sample, 96% (n = 1297) were recruited from clinics and 4% (n = 54) were recruited from health fairs.

Data Collection

We developed a structured interview instrument using existing validated Spanish language instruments, including items that had been successfully administered in the Spanish-language version of the Health Information National Trends (HINTS) survey⁽¹³⁾. Trained bicultural and bilingual cancer control coordinators conducted the face-to-face interviews in a private space; interviews lasted about 30 minutes. These interviews were conducted in the language of the participant's choice (99% were completed in Spanish). The interviewer used a laptop with the survey on the screen to record responses; 2% were completed using hard copy of the survey based on participant preference.

Measures

Primary Outcomes—The two outcome variables for our analyses were clinical trial awareness and intention to participate in a clinical trial. Awareness of trials was assessed by a multiple choice question: “Please tell me which one of the four definitions you think describes a clinical trial.” Response options were: “A project in a clinic, a test in an MD's office, a research project in which some patients are selected to try new treatments medications while others receive different medications or none at all, a group of medical students, or unsure.” Intention to participate in a trial was assessed after explanation of a clinical trial using responses to the item: “In the future, if you developed a health problem like cancer, would you consider joining a clinical trial that was testing a new cancer treatment that could help you?” Response options were “I would not participate, I might participate, I probably would participate, I definitely would participate, Not sure/haven't thought about it.” Since these items were inadvertently omitted from the first one-third of surveys, 407 (30%) individuals were excluded from the sample of 1351 respondents, leaving a final analytic sample of 944.

Independent Variables

Information-seeking behavior: To assess information-seeking behavior, participants were asked how often (not at all, very little, somewhat, quite a bit, always) they sought health information from the following sources: newspapers, magazines, radio, television, the Internet, health professionals (such as doctors and nurses, health educators/navigators, community leaders/priests, health fairs, and “Charlas de Salud”). Participants were also asked how much they trusted the information they received from these sources.

Personal cancer risk: We measured perceptions of personal cancer risk by asking participants the following question: “In your opinion, how likely is it that you will develop cancer?”, with possible responses ranging from “not at all likely” to “definitely” on a five-point scale.

Cancer worry: We measured worry by asking participants the following question: “In the past month, how often have you worried about your own chances of getting cancer?”, with possible responses ranging from “not at all or rarely” to “a lot” on a four-point scale.

Information Self-efficacy: An eight-question scale, modified from the Seeking and Understanding Medical Information Subscale from the Cancer Behavior Inventory was used to measure self-efficacy. Participants were asked to choose a number between 1 and 9, where 1 represents “not at all confident” and 9 represents “totally confident” in response to phrases such as “How confident are you that you can ask nurses questions about cancer.” Responses were summed and averaged to create a composite score; individuals were only given a score if they answered all eight items.

Control Variables

Demographic variables: Standard demographic information was obtained from participants, including age, gender, marital status, and country of origin, and highest grade completed.

Acculturation: We measured acculturation by asking participants four questions about language preference: (1) “In general, what language(s) do you read and speak?” (2) “In which language do you think?” (3) “What language do you speak at home?” and (4) “What language do you speak with friends?” Participants were also asked how many years they had lived in the United States.

Data Analysis

We evaluated the associations between each outcome and study variables using t-tests and chi-square tests. For each outcome the adjusted odds ratios (OR) and 95% confidence intervals (CI) were estimated using multivariable logistic regression. Variable selection for the final multivariable model was based on the significance (at 0.05 level) of univariable associations for that outcome; variables that were not significant at the 0.05 level were removed from the final model. Certain factors such as age and acculturation were retained in the final models even if not statistically significant to enhance face validity. Model fit was assessed using Hosmer-Lemeshow Goodness of Fit test. All analyses were conducted using SAS software Version 9.2 (SAS Institute, Inc., Cary, NC).

Results

More than half of the respondents were from Central America (65%) and the majority had 12 or fewer years of education (75%) and low acculturation levels (mean 1.5 score (SD \pm 0.7 on a 1–5 scale, with 1 indicating the lowest acculturation (Table 1). The primary source of health information reported was health care providers (66%) followed by the media (27%). Use of the National Cancer Institute Spanish Cancer Information Service (CIS) for cancer information was low. In addition, slightly less than half of the respondents had access to the Internet (41%). The majority of sites used for health information were Spanish language sites (data not shown).

Predictors of Clinical Trial Knowledge—Only one-half of respondents could correctly identify what a clinical trial was. Despite the high use of providers for information, in

univariable analyses, this channel of health information was not associated with correct knowledge of what a clinical trial was. However, respondents who used the Internet for health information had greater knowledge than respondents who did not have Internet access ($p = .001$) (Table 1). Socio-demographic factors were also associated with higher levels of correct knowledge about RCTs. These factors remained significant after considering the other covariates (Table 2). For instance, after controlling for other characteristics, respondents who used the Internet to search for health information had a 2.33 greater odds of knowing what a clinical trial was than those who did not use the Internet (95% CI 1.63–3.34, $p = .001$). Psychosocial factors were also independent correlates of knowledge, with those reporting greater trust in health information from health sources having higher odds of correct knowledge about clinical trials ($OR = 1.33$, 95% CI 1.12–1.58, $p = .001$) than those with less trust.

Predictors of Intention to Join a Clinical Trial—Univariable results indicate that psychosocial factors including trust in health information, greater worry about cancer and higher information self-efficacy were associated with intent to enroll in a clinical trial, while demographic factors were not (Table 1). Of note, despite low use, those who reported using CIS as a cancer information source reported greater intention to join a trial than those who did not use CIS (83% vs. 64%, $p = .01$). Those who could correctly identify the definition of a clinical trial stated that they would enroll in a trial more often than those who did not know what a trial was (71% vs. 60%, $p = .001$). All of these relationships remained significant in multivariable analyses (Table 3). For instance, those who called the CIS ($OR = 2.49$, 95% CI 1.01–6.14, $p = .05$) reported greater odds of intent to join a clinical trial than respondents who had not called the CIS.

Discussion

This is one of the first studies to describe the knowledge of and intention to participate in cancer clinical trials among low acculturated, immigrant Latinos. While only one half of the population knew what a clinical trial was, when explained, 65% indicated a willingness to participate in a trial. Our statistics are slightly higher than the Wendler et al.⁽¹⁴⁾ study which indicated that 56% of Latinos are willing to participate in clinical trials when offered accurate information. We found that several information channels, including the Internet and telephone call centers appear to be effective in conveying information about clinical trials. While providers were cited as the most common source of health information, provider information was not associated with clinical trial knowledge or intent to participate in trials. Finally, psychosocial but not demographic factors were related to intent to join a cancer clinical trial.

This population had a higher than expected rate of Internet use, with 41% reporting access and 78% of these individuals reporting use of Spanish-language Internet sites for health information. Nationally, the Pew Hispanic Center Internet Project reports that 56% of Latinos use the Internet, compared to 71% of non-Hispanic Whites and 60% of non-Hispanic Blacks.⁽¹⁵⁾ In our sample those using the Internet for health information were more likely to know about clinical trials, and that knowledge, was in turn, associated with intent to participate in a clinical trial. Thus, despite slightly lower use than other ethnic groups,^{(15), (16)} Spanish-language Internet sites have the potential to reach a large number of Latinos about cancer clinical trials. A study with Latinos has suggested that the internet has proven to be a valuable source for health information and health care decision-making⁽¹⁷⁾.

Use of a national information channel such as the National Cancer Institute's (NCI) Cancer Information Service (CIS) was very low (4%) in this Latino population, even though services are available in Spanish. However, we did find that contact with the CIS Spanish-

call lines was significantly associated with intent to participate in clinical trials. Given the cross-sectional nature of our study, we cannot determine if information imparted by the CIS resulted in interest in clinical trials, or if those who were motivated to join trials were more likely to call CIS. However, even under the latter scenario, it appears that CIS may have provided sufficient information to reinforce the intention to join a clinical trial. The CIS has been a valuable source for health information regarding up-to date information regarding cancer and clinical trials^{(18), (19)}. In addition, NCI has invested more in health education, including use of lay and professional educators at health fairs and other community outreach venues. We found that individuals who attended health fairs were more likely to report a willingness to enroll in clinical trial than those who did not receive health information in this setting. Therefore, it is possible that community-based health fairs could be used to convey clinical trial information, especially for prevention and screening trials since these events attract largely non-cancer populations.

Physicians are also a critical source of health information and strong motivators of general cancer-related behaviors in Latino and other ethnic minority populations^{(21), (22), (23), (24), (25), (26)}. In our study, providers were cited as the primary source of health information yet this information source was *not* associated with clinical trial knowledge or intent to participate in a trial. This was particularly surprising since our survey was conducted in health care settings. This apparent paradox may have several explanations. Many of the safety net clinics participating in our study rely on volunteer providers. It is possible that these volunteers are too busy to provide cancer health education, since the volume of patients requesting care exceeds capacity in these safety-net clinics. Another explanation for the lack of association between provider information and trial knowledge and interest is that trials are not easily available or offered via safety net clinics. In addition, given the pressing acute health care needs of safety net clinic populations, discussion of clinical trials may not be especially salient. Since Latino providers are considered respected leaders in the Latino community^{(27), (28)} and were considered a trusted source of health information in our study, there may be a missed opportunity for providers to convey education about clinical trials. Further research is needed to better understand patient-provider communication about clinical trials and how to leverage the potential of the patient-physician relationship to convey cancer clinical trial information to Latinos across a variety of health care delivery systems.

Our results suggest that when Latinos know about RCTs, they are willing to participate. This is similar to the findings of Umatyan et al.⁽¹²⁾ giving credence to the importance of clinical trial awareness prior to participation. The null results for associations between demographic factors and intent to participate in trials may further indicate that media or other information campaigns may not have to be tailored to these characteristics. However, it is possible that we obtained null results because our population was fairly homogenous with respect to demographic characteristics; these competing hypotheses will be important to test in future research with more heterogeneous Latino sub-groups from broader settings.

Our findings do suggest, however, that psychosocial factors have the potential for use in interventions. For instance, those with high trust in health information had higher odds of knowing about and being willing to participate in clinical trials. The fact that our population was receiving care in safety net Latino-focused clinics with bilingual staff may have increased their trust of health information.^{(21), (24)} If this is confirmed in future research, messages about trials could be linked to trusted information sources like clinics and/or include content that enhance their credibility in the Latino population.⁽²⁰⁾ Likewise, enhancing self-efficacy in obtaining trial information or tapping into perceived cancer risk could also be used to leverage interest in clinical trial participation. Other studies have shown that increased self-efficacy plays a role in a variety of behaviors^{(25), (26), (28)}.

There are some limitations that should be considered when evaluating our results, including the cross-sectional and quota design, external generalizability, and measurement issues. Due to the cross-sectional nature of this study, we can only estimate associations between variables of interest and clinical trial knowledge. Prospective studies will be important to determine directionality of the results we observed. We employed a quota sampling scheme so that we cannot calculate true clinic-wide prevalence rates. Our sample was a fairly homogenous immigrant, mono-lingual Latinos group from Central and South America who relied on safety net clinics for their care and as such, cannot be generalized to other Central and South American groups or other Latino populations. We used perceived risk measures and did not have data on actual cancer risk. Thus, the perceived risk measures require further investigation. Our measure of knowledge was based on only one question, although this question has been shown to relate to willingness to participate in trials in an earlier study in this same setting⁽³⁰⁾ Finally, we do not know how intention to participate in a trial relates to actual behavior, since there were no trials available to offer this population at the time of the study. This will be a critical link to establish prior to developing and testing interventions to increase trial enrollment.

Overall, this study fills an important gap in our knowledge about clinical trial information needs and intentions in the growing Latino immigrant population. Since cancer is the second leading cause of death in this group, it is important that they are represented in clinical trials of cancer-related interventions to ensure generalizability of results and that this group benefits equitably from advances in cancer scientific knowledge and discovery.

Acknowledgments

This research was funded by a grant from the National Cancer Institute (U01 CA114593-03S3) as part of the Latin American Cancer Research Coalition (LACRC). This research was also supported by NCI grant KO5 CA96940 (JM) and the Biostatistics and Bioinformatics Shared Resources at Lombardi Comprehensive Cancer Center under NCI grant P30CA51008 (AN, GL).

Reference List

1. National Cancer Institute. Boosting cancer trial participation. 2006.
2. National Institutes of Health. NIH guidelines on the inclusion of women and minorities as subjects in clinical research. 1993.
3. Baquet CR, Henderson K, Commiskey P, Morrow JN. Clinical trials: the art of enrollment. *Semin Oncol Nurs*. 2008 Nov; 24(4):262–9. [PubMed: 19000600]
4. Alvarez RA, Vasquez E, Mayorga CC, Feaster DJ, Mitrani VB. Increasing minority research participation through community organization outreach. *West J Nurs Res*. 2006 Aug; 28(5):541–60. [PubMed: 16829637]
5. U.S. Census Bureau. American community survey demographic and housing estimates: 2005–2007. U.S. Census Bureau; p. 200
6. American Cancer Society. Cancer facts & figures for Hispanics/Latinos 2006–2008. American Cancer Society; Atlanta, Georgia: 2006.
7. Murthy VH, Krumholz HM, Gross CP. Participation in cancer clinical trials: Race-, sex-, age-based disparities. *JAMA*. 2004; 291(22):2720–2726. [PubMed: 15187053]
8. Shavers VL, Lynch CF, Burmeister LF. Racial differences in factors that influence the willingness to participate in medical research studies. *Ann Epidemiol*. 2002 May; 12(4):248–56. [PubMed: 11988413]
9. Larkey LK, Ogden SL, Tenorio S, Ewell T. Latino recruitment to cancer prevention/screening trials in the Southwest: setting a research agenda. *Appl Nurs Res*. 2008 Feb; 21(1):30–9. [PubMed: 18226761]

10. Ellington L, Wahab S, Sahami MS, Field R, Mooney KH. Factors that influence Spanish-and English-speaking participants' decision to enroll in cancer randomized clinical trials. *Psychooncology*. 2006 Apr; 15(4):273–84. [PubMed: 15973647]
11. Lawsin CR, Borrayo EA, Edwards R, Belloso C. Community readiness to promote Latinas' participation in breast cancer prevention clinical trials. *Health Soc Care Community*. 2007 Jul; 15(4):369–78. [PubMed: 17578398]
12. Umutyun A, Chiechi C, Beckett LA, Paterniti DA, Turrell C, Gandara DR, Davis SW, Wun T, Chen MS Jr, Lara PN Jr. Overcoming barriers to cancer clinical trial accrual: impact of a mass media campaign. *Cancer*. 2008 Jan 1; 112(1):212–9. [PubMed: 18008353]
13. Brown M, Moyer A. Predictors of awareness of clinical trials and feelings about the use of medical information for research in a nationally representative US sample. *Ethn Health*. 2010 Jun; 15(3): 223–36. [PubMed: 20336563]
14. Wendler D, Kington R, Madans J, Van WG, Christ-Schmidt H, Pratt LA, Brawley OW, Gross CP, Emanuel E. Are racial and ethnic minorities less willing to participate in health research? *PLoS Med*. 2006 Feb.3(2):e19. [PubMed: 16318411]
15. DiMaggio PE, Hargittai E, Neuman WR, Robinson JP. Social implications of the Internet. *Annu Rev Sociol*. 2001; 27:307–336.
16. Katapodi MC, Lee KA, Facione NC, Dodd MJ. Predictors of perceived breast cancer risk and the relation between perceived risk and breast cancer screening: a meta-analytic review. *Prev Med*. 2004 Apr; 38(4):388–402. [PubMed: 15020172]
17. Pena-Purcell N. Hispanics' use of Internet health information: an exploratory study. *J Med Libr Assoc*. 2008 Apr; 96(2):101–7. [PubMed: 18379664]
18. Bright MA. The National Cancer Institute's Cancer Information Service: a premiere cancer information and education resource for the nation. *J Cancer Educ*. 2007; 22(1 Suppl):S2–S7. [PubMed: 17571997]
19. Kreps GL, Bright MA, Fleisher L, Marcus A, Morra ME, Perocchia RS. Future directions for the cancer information service and cancer education. *J Cancer Educ*. 2007; 22(1 Suppl):S70–S73. [PubMed: 17572004]
20. Ramanadhan S, Viswanath K. Health and the information nonseeker: a profile. *Health Commun*. 2006; 20(2):131–9. [PubMed: 16965250]
21. Sheppard VB, Wang J, Yi B, Harrison TM, Feng S, Huerta EE, Mandelblatt JS. Are health-care relationships important for mammography adherence in Latinas? *J Gen Intern Med*. 2008 Dec; 23(12):2024–30. [PubMed: 18839258]
22. Shokar NK, Nguyen-Oghalai T, Wu H. Factors associated with a physician's recommendation for colorectal cancer screening in a diverse population. *Fam Med*. 2009 Jun; 41(6):427–33. [PubMed: 19492190]
23. Bazargan M, Bazargan SH, Calderon JL, Husaini BA, Baker RS. Mammography screening and breast self-examination among minority women in public housing projects: the impact of physician recommendation. *Cell Mol Biol (Noisy -le-grand)*. 2003 Dec; 49(8):1213–8. [PubMed: 14983989]
24. Julliard K, Vivar J, Delgado C, Cruz E, Kabak J, Sabers H. What Latina patients don't tell their doctors: a qualitative study. *Ann Fam Med*. 2008 Nov; 6(6):543–9. [PubMed: 19001307]
25. Keller C, Fleury J. Factors related to physical activity in Hispanic women. *J Cardiovasc Nurs*. 2006 Mar; 21(2):142–5. [PubMed: 16601533]
26. Sarkar U, Fisher L, Schillinger D. Is self-efficacy associated with diabetes self-management across race/ethnicity and health literacy? *Diabetes Care*. 2006 Apr; 29(4):823–9. [PubMed: 16567822]
27. Sheppard VB, Cox LS, Kanamori MJ, Canar J, Rodriguez Y, Goodman M, Pomeroy J, Mandelblatt J, Huerta EE. Brief report: if you build it, they will come: methods for recruiting Latinos into cancer research. *J Gen Intern Med*. 2005 May; 20(5):444–7. [PubMed: 15963169]
28. Gazzinelli MF, Lobato L, Matoso L, Avila R, de Cassia MR, Shah BA, Correa-Oliveira R, Bethony JM, Diemert DJ. Health education through analogies: preparation of a community for clinical trials of a vaccine against hookworm in an endemic area of Brazil. *PLoS Negl Trop Dis*. 2010; 4(7):e749. [PubMed: 20651933]

29. Kreuter, M.; Farrell, D.; Olevitch, L.; Brennan, L. What is tailored communication?. In: Bryant, JD.; Zilmann, D., editors. Tailoring health messages: Customizing communications with computer technology. Mahwah, NJ: Erlbaum; 2000. p. 1-23.
30. Mandelblatt J, Kaufman E, Sheppard VB, Pomeroy J, Kavanaugh J, Canar J, Pallandre L, Cullen J, Huerta E. Breast cancer prevention in community clinics: will low-income Latina patients participate in clinical trials? *Prev Med.* 2005 Jun; 40(6):611–8. [PubMed: 15850856]

Table 1

Correlates of Cancer Clinical Trial Knowledge and Intent to Join a Trial among an Immigrant Latino Population ($N = 944$)

Variable	N	%
Demographics		
Age, years		
Mean (SD)	41	13
Region		
Central America	611	65
North America	96	10
South America	237	25
Gender		
Male	452	48
Female	492	52
Marital Status		
Unmarried	312	33
Married	626	66
Unknown	6	1
Education		
Less than 12 years	473	50
12 years	238	25
More than 12 years	216	23
Unknown	17	2
Acculturation		
Mean (SD)	2	1
Media Exposure Variables		
Primary Media Source		
Health Care Providers	626	66
Informal/Interpersonal	42	4
Media	259	27
Other	11	1
Unknown	6	1
Use of Internet		
No Internet	557	59
Internet, no health search	82	9
Internet, health search	300	32
Unknown	5	1
Use of cell phone		
No cell	208	22
Cell, no text	464	49
Cell, text	267	28
Unknown	5	1

Variable	N	%
Ever call CIS?		
Yes	41	4
No	903	96
Do you go to health fairs?		
Yes	272	29
No	656	69
Unknown	16	2
Knowledge of a clinical trial		
Wrong Answer	489	52
Correct Answer	455	48
Psychosocial Variables		
Trust in health information from health sources		
Mean (SD)	4	1
Likelihood of developing cancer		
Low (not at all, little bit)	484	51
High (somewhat, very likely, Definitely)	356	38
Unknown	104	11
How often worried about getting cancer in the past month?		
Not at all	421	45
Sometimes/Often	418	44
A lot	89	9
Refused	16	2
Self-Efficacy		
Mean (SD)	7	2

Acculturation ranges from 1 to 5 with higher scores reflecting higher acculturation. Trust in health information ranges from 1 to 5 with higher scores reflecting higher trust.

Table 2
Correlates of Cancer Clinical Trial Knowledge among an Immigrant Latino Population (*N* = 944)

Variable	Yes		No		p-value
	N	%	N	%	
Demographics					
Age, years					
Mean (SD)	40	12	41	14	0.25
Region					0.03
Central America	277	45	334	55	
North America	46	48	50	52	
South America	132	56	105	44	
Gender					0.42
Male	224	50	228	50	
Female	231	47	261	53	
Marital Status					0.004
Unmarried	129	41	183	59	
Married	321	51	305	49	
Unknown	5	83	1	17	
Education					<0.001
Less than 12 years	176	37	297	63	
12 years	135	57	103	43	
More than 12 years	138	64	78	36	
Unknown	6	35	11	65	
Acculturation					
Mean (SD)	2	1	1	1	0.001
Media Exposure Variables					
Primary Media Source					<0.001
Health Care Providers	286	46	340	54	
Informal/Interpersonal	12	29	30	71	
Media	150	58	109	42	
Other	7	64	4	36	

Variable	Yes		No		p-value
	N	%	N	%	
Unknown	0	0	6	100	
Use of Internet					<0.001
No Internet	217	39	340	61	
Internet, no health search	41	50	41	50	
Internet, health search	193	64	107	36	
Unknown	4	80	1	20	0.49
Use of cell phone					
No cell	96	46	112	54	
Cell, no text	221	48	243	52	
Cell, text	137	51	130	49	
Unknown	1	20	4	80	0.81
Ever call CIS?					
Yes	19	46	22	54	
No	436	48	467	52	0.51
Do you go to health fairs?					
Yes	135	50	137	50	
No	310	47	346	53	
Unknown	10	63	6	38	
Psychosocial Variables					
Trust in health information from health sources					
Mean (SD)	4	1	4	1	<0.001
Likelihood of developing cancer					
Low (not at all, little bit)	261	54	223	46	0.005
High (somewhat, very likely, definitely)	157	44	199	56	
Unknown	37	36	67	64	
How often worried about getting cancer in the past month?					
Not at all	192	46	229	54	0.03
Sometimes/Often	221	53	197	47	
A lot	36	40	53	60	

Variable	Yes		No		p-value
	N	%	N	%	
Refused	6	38	10	63	
Self-Efficacy	7	1	7	2	0.93
Mean (SD)					

Acculturation ranges from 1 to 5 with higher scores reflecting higher acculturation. Trust in health information ranges from 1 to 5 with higher scores reflecting higher trust.

Table 3
 Correlates of Intent to Join a Trial among an Immigrant Latino Population (N = 944)

Variable	Probably/Definitely		Would not/Might/Unsure		p-value
	N	%	N	%	
Demographics					
Age, years					
Mean (SD)	41	13	41	13	0.55
Region					0.37
Central America	387	63	224	37	
North America	67	70	29	30	
South America	158	67	79	33	
Gender					0.13
Male	282	62	170	38	
Female	330	67	162	33	
Marital Status					0.26
Unmarried	210	67	102	33	
Married	398	64	228	36	
Unknown	4	67	2	33	
Education					0.69
Less than 12 years	302	64	171	36	
12 years	159	67	79	33	
More than 12 years	143	66	73	34	
Unknown	8	47	9	53	
Acculturation					
Mean (SD)	2	1	2	1	0.82
Media Exposure Variables					
Primary Media Source					0.67
Health Care Providers	402	64	224	36	
Informal/Interpersonal	25	60	17	40	
Media	174	67	85	33	
Other	8	73	3	27	

Variable	Probably/Definitely		Would not/Might/Unsure		p-value
	N	%	N	%	
Unknown	3	50	3	50	0.60
Use of Internet					
No Internet	356	64	201	36	
Internet, no health search	57	70	25	30	
Internet, health search	196	65	104	35	
Unknown	3	60	2	40	0.53
Use of cell phone					
No cell	128	62	80	38	
Cell, no text	306	66	158	34	
Cell, text	174	65	93	35	
Unknown	4	80	1	20	0.01
Ever call CIS?					
Yes	34	83	7	17	
No	578	64	325	36	0.01
Do you go to health fairs?					
Yes	195	72	77	28	
No	408	62	248	38	
Unknown	9	56	7	44	<0.001
Knowledge of a clinical trial					
Wrong answer	291	60	198	40	
Correct answer	321	71	134	29	
Psychosocial Variables					
Trust in health information from health sources					
Mean (SD)	4	1	4	1	0.02
Likelihood of developing cancer					0.17
Low (not at all, little bit)	310	64	174	36	
High (somewhat, very likely, definitely)	244	69	112	31	
Unknown	58	56	46	44	<0.001
How often worried about getting cancer in the past month?					

Variable	Probably/Definitely		Would not/Might/Unsure		p-value
	N	%	N	%	
Not at all	251	60	170	40	
Sometimes/Often	225	66	115	34	
A lot	127	76	40	24	
Refused	9	56	7	44	
Self-Efficacy					
Mean (SD)	7	2	7	2	0.001

Acculturation ranges from 1 to 5 with higher scores reflecting higher acculturation. Trust in health information ranges from 1 to 5 with higher scores reflecting higher trust.