

10-1-2014

Factors Influencing Latino Participation in Community-Based Diabetes Education

Sarah L. Francis

Iowa State University, slfrancis@iastate.edu

Amber Noteman

Iowa State University, ambern@iastate.edu

Ruth Litchfield

Iowa State University, litch@iastate.edu



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Recommended Citation

Francis, S. L., Noteman, A., & Litchfield, R. (2014). Factors Influencing Latino Participation in Community-Based Diabetes Education. *The Journal of Extension*, 52(5), Article 29. <https://tigerprints.clemson.edu/joe/vol52/iss5/29>

This Research in Brief is brought to you for free and open access by the Conferences at TigerPrints. It has been accepted for inclusion in The Journal of Extension by an authorized editor of TigerPrints. For more information, please contact kokeefe@clemson.edu.

Factors Influencing Latino Participation in Community-Based Diabetes Education

Abstract

An Extension diabetes program (DP) was revised for Latinos; however, participation was limited. Factors influencing low participation rates were examined. Five Latinos interested in the DP participated in a focus group discussion. Transcripts were analyzed for themes. Preferred education programs were multi-session, local, group classes led by an engaging teacher during the summer. Participants learned of the DP through friends and Extension; preferred marketing strategies were Spanish radio, local health clinics, and Spanish-print media. Attendance barriers included scheduling conflicts. Limited use of culturally preferred marketing and scheduling conflicts were likely barriers. Culturally appropriate programs should use culturally preferred marketing strategies to be successful.

Sarah L. Francis
Assistant
Professor/State
Nutrition Extension
and Outreach
Specialist
sfranci@iastate.edu

Amber Noterman
Undergraduate
Research Assistant
ambern@iastate.edu

Ruth Litchfield
Associate
Professor/State
Nutrition Extension
and Outreach
Specialist
litch@iastate.edu

Department of Food
Science and Human
Nutrition (FSHN)
Iowa State University
Ames, Iowa

Introduction

The burden of diabetes is particularly high for Latinos, with 11.8% of U.S.-residing Latinos ages 20+ years having been diagnosed with diabetes, compared with 7.1% of whites (Centers for Disease Control and Prevention [CDC], 2011; Iowa Dept. of Public Health [IDPH], 2010). Mexican Americans, the largest Hispanic subgroup, are two times more likely to have diabetes than non-Hispanic whites of similar age (CDC, 2011) and are more likely to have higher rates of diabetes complications (American Diabetes Association, 2007; Office of Minority Health, 2013). Many factors contribute to diabetes disparities for Latinos, including lack of health insurance, limited access to linguistically and culturally appropriate health care, low health literacy, economic barriers, fear or mistrust of the health care system, and traditional provider-directed intervention models of care (Carbone, Rosal, Torres, Goins, & Bermudez, 2007; Hale & Bennett, 2010). The growing diabetes epidemic among Latinos has created the need for culturally appropriate community-based diabetes education. Extension has an opportunity to reduce these diabetes disparities for Latinos by providing community-based preventive health programming.

Extension has become increasingly involved in the delivery of diabetes prevention programs. In 1997, West Virginia University developed and tested a community-based diabetes education program, Dining with Diabetes (DWD), targeting modifiable lifestyle behaviors (diet and exercise) for those with pre-diabetes and type 2 diabetes. A key component of the DWD program is the collaboration between Extension educators and community health providers. This collaboration allows those with limited resources (including limited and/or no insurance coverage) to receive comprehensive education pertaining to diabetes self-management. Many state Extension programs (e.g., Ohio, Pennsylvania, Illinois, California, Virginia, and Wyoming) have adopted DWD because it results in improved hemoglobin A_{1c} levels (Burcham, 2009).

The DWD program had been translated into Spanish, but had not been revised to be culturally relevant and appropriate for a Latino audience. Therefore, DWD was revised using the principles of the Health Belief Model

(Champion & Skinner, 2008) and Social Marketing Theory (Storey, Saffitz, & Rimón, 2008), in addition to incorporating elements of the Kitchen Creations program (New Mexico State University). The content, activities, and recipes were chosen to address the diabetes self-management needs and food preferences identified through statewide focus groups (Reyes, Engebretsen, Ericson, Garcia, & Bagade, 2010) and bodega tours. The DWD program for Latinos was revised to better address the identified barriers to diabetes self-care, including using common, culturally preferred food choices for label reading activities, discussing carbohydrate counting using frequently consumed foods, and using a culturally appropriate cookbook for the recipes. The program was designed to be conducted in Spanish and was co-taught by an Extension specialist (registered dietitian) and an Extension assistant (Latina).

The revised DWD program was offered in collaboration with a non-profit community health center serving Latinos. Therefore, recruitment efforts for the revised DWD program used print media (e.g., flyers, notecards) at the center, local churches, and libraries serving Latinos as well as in-person referrals (e.g., health center social worker, Extension assistant). These marketing methods were recommended in the diabetes education literature used for program development (Rosal et al., 2010; Rosal et al., 2005; Toobert et al., 2010; Vincent, Pasvogel, & Barrera, 2007).

Four attempts were made to implement DWD in two Latino communities; however, each attempt failed despite several community members expressing interest. To our knowledge, there is limited research examining the motivators and barriers toward Latino participation in diabetes education. The purpose of the study reported here was to investigate why Latinos in the program area were expressing interest but not attending DWD.

Methods

Recruitment

Participants who initially expressed interest in the revised DWD program (N=10) were contacted by the Extension assistant who was Latina and invited to attend a focus group discussion. Five (1 male, 4 female) chose to participate in a 1-hour focus group at a local library in the Latino community. Participants provided informed consent and received the *Diabetic Cooking for Latinos* cookbook (Fuste, 2002) for their time.

Focus Groups

Participants completed a sociodemographic and diabetes self-management questionnaire (in Spanish) prior to beginning the discussion; four (of five) participants completed the questionnaire. Focus group questions queried: (1) the impact of diabetes on participants' lives, (2) diabetes advice received thus far, (3) preferred education and/or learning approaches, (4) concerns regarding completing forms requesting personal information, (5) recruitment preferences, and (6) DWD-specific questions (i.e., why they were interested in DWD, preferred content, barriers to attendance, etc.). The focus group was conducted in Spanish and audio-recorded.

Data Analysis

The audio-recording was transcribed by an independent bilingual transcriptionist. The transcripts were analyzed for common themes by the researchers per common practice (Krueger & Casey, 2009). General descriptive statistics were used to assess questionnaire responses.

Results

Participants were primarily middle-aged females (4 of 5) ages 33 to 47 years (average age 40.8 years) with limited education (Table 1). Two participants had a family member with diabetes, one was newly diagnosed (within the last 6 months), and one had been diagnosed for over 2 years. These participants reported receiving medical advice

about diet and blood glucose control.

Table 1.
Characteristics of Participants (N=4)

Characteristic	Number	Percent (%)
Time Since Diabetes Diagnosis^a		
<6 months	1	25
>2 years	1	25
Does not have diabetes, family member does	2	50
Education^a		
<8 years education	3	75
9-12 years education	1	25
Insulin Use^b		
Yes	1	33.3
No	2	66.7
Oral Medication Use^a		
Yes	2	50
No	2	50
Received advice from health care provider about...^{a,c}		
Blood sugar control	4	100
Diet	3	75
Foot care	2	50
Exercise	1	25
Note: ^a Total number of participants is four ^b Total number of participants is three; ^c Participants were able to choose more than one answer		

Preferred Education Program Strategies

Group interaction was emphasized by participants as the key to an enjoyable educational program experience. Other important motivators for participation were energy and enthusiasm demonstrated by the educator. Listening and observing was the preferred learning style of these participants. Weekly classes taught as part of a consecutive 5- to 6-week group program was deemed an appropriate program design.

The reported "best programming time" was 6:00 pm because mealtime would be finished. Another suggested option was summer classes because participants would not need to work around their children's school schedule. Other preferred programming attributes included offering childcare and choosing a nearby location to hold the program. The type of location (e.g., church vs. library) was not of concern as demonstrated by the statement, "The place does not matter [to me] as long [as it] is close to where we live."

Additionally, the reported topics identified as "needing to be addressed" in a diabetes education program were (1) learning to prevent and manage diabetes, (2) insulin use, and (3) diet management, specifically carbohydrates, portion sizes, and weight management. Furthermore, when asked about completing forms (e.g., evaluation documents, questionnaires) at educational programs, it was a group consensus to keep these to a minimum. One reported, "[I feel] tired, nervous, and [I] worry if I do not know the answers to the questions." Participants did not report any specific types of questions they would prefer not to answer. Finally, to better promote understanding and communications, some preferred that Spanish-speaking individuals teach their educational programs.

Barriers to DWD Participation

Reported barriers for attending the DWD program included limited time, family and work conflicts, viewing DWD as a low priority, and limited transportation. For example, when asked what factors influenced not being able to attend classes, one participant listed, "The time, work, the car, my kids." Although assumed to be a participation barrier, the completion of the questionnaires did not surface as one.

Preferred Program Marketing

The key methods of learning about educational programs available in their local area included Spanish radio, friends, and newspapers (both Spanish and English). One participant recommended that the DWD program should be promoted on the radio because, "There is a radio station where some days they have a doctor talking about diabetes in Spanish; the only one in Spanish!" The primary ways the participants learned about DWD were through friends and the Extension program assistant in their community. When asked for suggestions on how to make the revised DWD program more successful, it was suggested that more participants be recruited, with some stating, "Place ads in places where more Latinos live" and "Try to invite more people, maybe announce it on the radio."

Discussion

The preferred programming attributes (i.e., group format, an engaging instructor, locally-based) and barriers to participation (i.e., time, family and work conflicts, limited transportation) described by focus group participants were addressed in the revised DWD program, suggesting that both content and delivery style of DWD was culturally appropriate. Based on these findings, it is likely, that the revised DWD program was poorly attended because of factors unrelated to the program design, including scheduling and marketing.

When scheduling the DWD program, classes were offered at local churches in or near Latino communities at a variety of times during the year (i.e., late spring, mid-summer, mid-fall, and winter) and day (i.e., morning, early afternoons, and evenings), depending on the preference of the audience. Although these scheduling options did not improve DWD participation rates, Parikh and others (2010) offered a diabetes program for Latinos at a variety of times and at different locations within the community, resulting in a low attrition rate (less than 30% at 12 months). Additionally, the program assistant (Latina) had proposed that an attendance barrier may be the completion of the questionnaires. In response, she went to participants' homes to help them complete the questionnaires. Despite trying to find convenient locations and times for the revised DWD program, the barriers of scheduling and work conflicts remained an issue for these participants.

Even though scheduling challenges adversely affected DWD attendance, the multiple failed DWD delivery attempts are most likely the result of using culturally inappropriate marketing strategies, which led to a limited number of Latinos with diabetes being made aware of the revised DWD program. Marketing of DWD was conducted using common Extension techniques, including flyers, notecards, and word of mouth. Participants were also recruited through health clinics serving Latinos. The social workers at these medical clinics provided DWD fliers to clients with diabetes and provided the Extension program assistant with the contact information of adults interested in attending DWD. The flyers were displayed at community centers and libraries in Latino neighborhoods. Although recruiting

through the health center was not effective for the DWD program, others have had success with referrals through community agencies and networks (Lewis et al., 1998; Quinn, Thomas, & Hauser, 2008; Rosal et al., 2010; Rosal et al., 2005; Toobert et al., 2010; Vincent, Pasvogel, & Barrera, 2007).

The aforementioned marketing strategies were not the preferred methods for this small sample of Latinos. As stated previously, Spanish radio and print media were the reported preferred program marketing methods for these participants and has been shown to be an effective means of outreach within the Latino community (Santoyo-Olsson et al., 2011; Delgadillo, 2003; Lewis et al., 1998; Romero-Gwynne & Marshall, 1990). Combining Spanish radio, television, and print media together and collaborating with local agencies serving Latinos is likely the most effective strategy to reaching as many potential participants as possible.

The small sample size limits the generalizability of these results. Because these participants volunteered to take part in this focus group discussion, they may have had a higher interest in DWD than those who did not. Their greater motivation may have led to more positive affirmation about the DWD program. Furthermore, the small size of the group may have caused some participants to go with the majority rather than stating an opposing viewpoint. Despite these limitations, the information gathered provides insight into the preferred marketing strategies of this sample of Latinos.

Summary and Implications for Extension

The revised DWD Program for Latinos incorporates many culturally preferred program attributes shown to be part of successful nutrition education programming for Latinos. The failed delivery attempts of the revised DWD program for Latinos was likely due to the use of un-preferred, culturally inappropriate marketing strategies. In order to ensure that culturally appropriate Latino-targeted Extension programming is reaching the intended audience, it is imperative to use culturally preferred marketing approaches. This may entail deviating from common Extension practice locally and developing new networks within the Latino community.

Based on these findings, the following steps would likely increase attendance of the revised DWD program for Latinos:

1. Identify Latino community health organizations, community centers, or churches that may have Spanish newsletters or other print materials in which programming advertisements can be placed.
2. Identify popular Latino print media outlets within the target community to place programming announcements.
3. Identify Latino targeted radio or television stations to air a public service announcement about the program.

Acknowledgements

The research reported here was supported by the Institute for Clinical and Translational Science at the University of Iowa and NIH CTSA Award number UL1RR024979.

References

- American Diabetes Association (2007). Standards of medical care in diabetes: Classification and diagnosis. *Diabetes Care*, 31(1), S12-S13.
- Burcham, L. (2009). Dining with Diabetes: Program helps diabetics make beneficial lifestyle changes. *Virginia Tech College of Agriculture and Life Sciences Innovations*, 6-7.
- Carbone, E. T., Rosal, M. C., Torres, M. I., Goins, K. V., & Bermudez, O. I. (2007). Diabetes self-management: Perspectives of Latino patients and their health care providers. *Patient Education and Counseling*, 66, 202-210.
- Centers for Disease Control and Prevention. (2011). *National diabetes fact sheet: General information and national*

estimates on diabetes in the United States, 2011. Atlanta, GA. US department of health and human Services.
Retrieved from: http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf

Champion, V. L., & Skinner, C. S. (2008). The health belief model. In Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.), *Health behavior and health education: theory, research, and practice*. (pp. 45-65). San Francisco, CA: Jossey-Bass, Inc.

Delgado, L. (2003). Guidelines for reaching out and counseling low income monolingual Latino clients. *Journal of Extension* [On-line], 41(6) Article 6FEA5. Available at: <http://www.joe.org/joe/2003december/a5.php>

Fuste, O. (2002). *Diabetic cooking for Latinos*. Alexandria: American Diabetes Association.

Hale, N. L., & Bennett, K. J. (2010). Diabetes care and outcomes: Disparities across rural America. *Journal of Community Health*, 35, 365-374.

Iowa Department of Public Health (2010) *Burden of diabetes in Iowa 1991-2009, full report: diabetes prevalence and diabetes-related hospitalizations and deaths among Iowans*. Iowa Department of Public Health. Retrieved from: http://www.idph.state.ia.us/hpcdp/common/pdf/diabetes/2009_report_burden.pdf

Krueger, R. A., & Casey, M. A. (2009). *Focus groups: A practical guide for applied research*. Los Angeles: SAGE.

Lewis, C. E., George, V., Fouad, M., Porter, V., Bowen, D., & Urban, N. (1998). Recruitment strategies in the women's health trial: Feasibility study in minority populations. *Women's Health Trial: Feasibility Study in Minority Populations Investigators Group*, 462-475.

Office of Minority Health (2013, March 12). *Diabetes and Hispanic Americans*. Retrieved from: <http://minorityhealth.hhs.gov/templates/content.aspx?ID=3324>

Parikh, P., Simon, E. P., Fei, K., Looker, H., Goytia, C., & Horowitz, C. R. (2010) Results of a pilot diabetes prevention intervention in East Harlem, New York City: Project HEED. *American Journal of Public Health*, 100, (Suppl 1) S232-S239.

Quinn, G. P., Thomas, K. B., Hauser, K., Rodríguez, N. Y., & Rodríguez-Snapp, N. (2009). Evaluation of educational materials from a social marketing campaign to promote folic acid use among Hispanic women: Insight from Cuban and Puerto Rican ethnic subgroups. *Journal of Immigrant and Minority health*, 11, 406-414.

Reyes, J., Engebretsen, B., Ericson, B., Garcia, E., & Bagade, S. (2010). *Diabetes focus groups: Report on barriers to chronic illness care*. Iowa Institute for Clinical and Translational Science. Retrieved from: http://www.idph.state.ia.us/hcr_committees/common/pdf/prevention_chronic_care_mgmt/082710_diabetes_group.pdf

Romero-Gwynn, E., & Marshall, M. K. (1990). Radio: Untapped teaching tool. *Journal of Extension* [on-line], 28(1) Article 1FEA1. Available at: <http://www.joe.org/joe/1990spring/a1.php>

Rosal, M. C., Olendzki, B., Reed, G. W., Gumieniak, O., Scavron, J., & Ockene, I. (2005). Diabetes self-management among low-income Spanish-speaking patients: A pilot study. *Annals of Behavioral Medicine*, 3, 223-235.

Rosal, M. C., White, M.J., Borg, A., Scavron, J., Candib, L., Ockene, I., & Magner, R. (2010). Translational research at community health centers: Challenges and successes in recruiting and retaining low-income Latino patients with type 2 diabetes into a randomized clinical trial. *The Diabetes Educator*, 36(5), 733-749.

Santoyo-Olsson, M. S., Cabrera, J., Freyre, B. S., Grossman, M., Alvarez, B. S., Mathur, D., Guerrero, M....Stewart, A. L. (2011). An innovative multiphased strategy to recruit underserved adults into a randomized trial of a community-based diabetes risk reduction program. *The Gerontologist*, 51(S1), S82-S93.

Storey, J. D., Saffitz, G. B., & Rimón, J. G. (2008). Social marketing. In Glanz, K., Rimer, B. K., & Viswanath, K.

(Eds.), *Health behavior and health education: theory, research, and practice*. (pp. 435-464). San Francisco, CA: Jossey-Bass, Inc.

Toobert, D. J., Strycker, L. A., Glasgow, R. E., Osuna, D., Doty, A. T., Barrera, M.,...Ritzwoller, D. P. ¡Viva bien! (2010). Overcoming recruitment challenges in a multiple-risk-factor diabetes trial. *American Journal of Health and Behavior*, 34(4), 432-441.

Vincent, D., Pasvogel, A., & Barrera, L. A feasibility study of a culturally tailored diabetes intervention for Mexican Americans. *Biological Research Nursing*, 9(2), 130-141.

Copyright © by *Extension Journal, Inc.* ISSN 1077-5315. Articles appearing in the Journal become the property of the Journal. Single copies of articles may be reproduced in electronic or print form for use in educational or training activities. Inclusion of articles in other publications, electronic sources, or systematic large-scale distribution may be done only with prior electronic or written permission of the Journal Editorial Office, joe-ed@joe.org.

If you have difficulties viewing or printing this page, please contact [JOE Technical Support](#)