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Integrating Diabetes Self-Management Interventions for Mexican-Americans into the Catholic Church Setting

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Abstract

Churches provide an innovative and underutilized setting for diabetes self-management programs for Latinos. This study sought to formulate a conceptual framework for designing church-based programs that are tailored to the needs of the Latino community and that utilize church strengths and resources. To inform this model, we conducted six focus groups with mostly Mexican-American Catholic adults with diabetes and their family members ($N = 37$) and found that participants were interested in church-based diabetes programs that emphasized information sharing, skills building, and social networking. Our model demonstrates that many of these requested components can be integrated into the current structure and function of the church.

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However, additional mechanisms to facilitate access to medical care may be necessary to support community members' diabetes care.

Keywords

Church-based; Mexican-Americans; Diabetes; Catholic

Introduction

Mexican-Americans in the United States bear a disproportionate burden of diabetes (Wong et al. 2002; Centers for Disease Control and Prevention 2011). They are almost twice as likely to have diabetes compared to non-Hispanic whites and less likely to achieve optimal glycemic control (National Institute of Diabetes and Digestive and Kidney Diseases 2008; Saydah et al. 2007). In managing diabetes, Latinos report barriers such as high healthcare costs, lack of health insurance, fear of deportation, lack of necessary resources to engage in appropriate lifestyle modifications, conflicting cultural norms, and language barriers (Fernandez et al. 2004; Gary et al. 2003; Cusi and Ocampo 2011). Novel interventions are needed to improve diabetes care in the rapidly growing Latino population (Wong et al. 2002; Centers for Disease Control and Prevention 2011; Humes et al. 2011; Institute of Medicine 2000; Minkler and Wallerstein 2003; Tunis et al. 2003; Israel et al. 2005; Viswanathan et al. 2004; United States Census Bureau 2011).

Innovative diabetes interventions that are culturally tailored to Latinos may require partnerships with community organizations, such as churches, to overcome the unique cultural barriers that they face (Jones and Wells 2007; Castro et al. 1995; Ramirez et al. 2007; Zahuranec et al. 2008; Norris et al. 2002; Pew 2007; Caban and Walker 2006). Considering that more than two-thirds of Latinos identify themselves as Roman Catholics and that most attend a religious service at least once a month, Catholic churches may provide a fruitful and underutilized context for chronic disease self-management interventions for Latinos (Pew 2007). Many Latinos are interested in health education projects based in churches, which are viewed as safe havens and can be central to Latino culture (Pew 2007; Caban and Walker 2006). Additionally, churches offer many advantages. They reach a broad population and can provide social support, volunteers, communication channels, and facilities (Lasater et al. 1997). Therefore, it is not surprising that many church-based programs, including parish nursing programs and health ministries, have been successfully implemented across the country (DeHaven et al. 2004; Wilcox et al. 2007; Dodani and Fields 2010; Dyess et al. 2010; Chase-Ziolek 1999). Among Latino communities, however, church-based interventions have focused on cancer screening, vaccination programs, and violence prevention, not chronic diseases such as diabetes (Ramirez et al. 2007; Zahuranec et al. 2008; DeHaven et al. 2004; Kataoka et al. 2006; Lopez and Castro 2006; Daniels et al. 2007). The lessons learned from current church-based programs may not be translatable to chronic disease interventions. Addressing chronic diseases requires ongoing encouragement of behavioral and lifestyle modifications and a focus on prevention of long-term consequences. Since there are few church-based chronic disease programs for Latinos, we currently do not know what types of church-based diabetes self-management interventions are best suited and preferred by Latinos to address their diabetes needs.

Integrating nutrition education, family, and spirituality into diabetes education programs for Latinos is important, but it is unclear how these preferences translate into the church setting (Peek et al. 2007; Sarkisian et al. 2005). In this study, we conducted focus groups with mainly Mexican-American Catholics with diabetes and their family members to assess (1)

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perceived impact of diabetes; (2) barriers to diabetes management; and (3) preferences for church-based diabetes programming. Since not much research exists in this area, we used qualitative methods to elicit their preferences. We used the findings from these focus groups to develop a conceptual model for integrating diabetes self-management interventions for Mexican-Americans into the Catholic church setting.

Methods

Study Design

We conducted our work in a Chicago neighborhood where 83 % of the population identifies themselves as Hispanic, a majority being Mexican-American (U.S. Census 2000). In this neighborhood, community members have many risk factors for poor health, including low educational attainment, low household income, and low rates of health insurance (Chicago Department of Public Health 2006). After months of meetings with priests and other key community stakeholders, the principal investigator (AB) formed a collaborative partnership with two predominantly Mexican-American, Catholic churches in the neighborhood. The diabetes-related mortality rate is significantly higher in this neighborhood than in the rest of Chicago, and thus, the church partners and the PI both identified diabetes as a top health priority (Chicago Department of Public Health 2006). The two churches already offered some health resources to their congregants, such as health education lectures, health screening events, and support groups. One church had a parish nurse who organized health fairs and screenings, blood drives, exercise classes, and health lectures. However, the partners agreed that additional resources were needed to support people with diabetes in the community. Thus, to implement a successful church-based intervention, the partners decided to speak with parishioners affected by diabetes and their family members to assess their interest in a church-based diabetes program and to elicit their preferences for the content and format of such a program.

Between February and April 2009, the research team and partner churches conducted six focus groups with 37 adults diagnosed with diabetes or who had a family member with diabetes. Based on language preferences, five groups were held in Spanish and one in English. Each focus group at one of the partnering churches lasted approximately 90 min and was conducted by a bilingual moderator. The Spanish focus groups were moderated by a Latino moderator. The English focus group was moderated by a non-Latino. The focus group discussions were audio-recorded, transcribed, and translated into English as needed. All study procedures were approved by the University of Chicago Institutional Review Board.

Participant Recruitment

The research team recruited participants through flyers posted at churches and direct contact at church events such as blood donation drives and health fairs. Some participants referred their family and friends to the research team. Eligible participants included adults 29 years of age or older who had diabetes or had a family member with diabetes. Participants who could not give informed consent, were pregnant, or did not speak English or Spanish were excluded. The research team screened 85 participants of whom 77 were eligible and 71 enrolled. Thirty-seven people attended the groups. Focus groups could include members of the same family. However, we did not ask participants to identify family members who were present in the group. There was no statistically significant difference in people who did or did not attend the focus group sessions by age, gender, or diagnosis of diabetes. Study participants received a tote bag and bilingual diabetes literature after attending the focus group.

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Interview and Survey Instruments

The main study objective was to assess the interest of Mexican-Americans with diabetes and their family members for church-based diabetes self-management interventions, and the desired content and format of such programs. The bilingual moderator followed a semi-structured questioning guide that was developed in an iterative way based on discussions with the research team and the community partners. The moderator used a funnel approach in her questioning; she initially asked broad, open-ended questions and then probed for personal preferences regarding diabetes self-management interventions. The discussion began with questions such as “How has diabetes affected your life?” After allowing participants to voice their opinions, the moderator asked more specific questions about barriers to managing diabetes, knowledge of diabetes resources in the church and community, interest in church-based programming for diabetes, and thoughts on the content and format of different approaches, including diabetes diaries, one-to-one peer support programs, and group education with self-empowerment training. Participant sociodemographic and self-reported health information was collected via self-administered surveys directly following the focus group sessions.

Analysis

Focus groups were conducted until theme saturation was met (Strauss and Corbin 1991). All sessions were audiotaped and transcribed verbatim. Focus groups conducted in Spanish were translated by a professional translation service and reviewed by bilingual staff on the research team. Any discrepancies were resolved in consultation with the professional translation service. Transcribed data were imported into Hyperresearch 2.8.3 software for analysis (Researchware 2007, Randolph, MA, http://www.researchware.com/products/hyperresearch.html). Three investigators on the research team (AB, CL, and RGB) reviewed and coded the first transcript, met to discuss codes, and created uniform coding guidelines using grounded theory (Morse 1995). A codebook was developed using an iterative process where modifications were made to the codes and themes as concepts arose from new transcripts (Morgan 1997). Subsequently, two reviewers from the research team (AB and CL) independently coded each transcript and met periodically to discuss the coding. Discrepancies were resolved by including the third coder (RGB). Themes that arose from the focus groups were used to develop a framework for designing church-based diabetes self-management interventions for Mexican-Americans.

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Results

Participants had a mean age of 53 years (Table 1). Most participants were women (78 %), had completed high school (65 %), had health insurance (57 %), were of Mexican descent (81 %), and were born in Mexico (60 %). A majority of the participants with diabetes self-reported taking hypoglycemic medications (83 %). One person reported having pre-diabetes.

Barriers to Care

One critical, frequently cited barrier to care was access to the medical system, including the difficulty and challenge of procuring health insurance (Table 2). Other barriers included poor interactions with providers and high healthcare costs. One participant noted,

> When I go to Mexico, I go to the doctor. I take advantage [of the opportunity to get] the tests because it’s too expensive here.

Another critical barrier was lack of information about the causes and risk of diabetes and how to manage their disease. One participant stated,

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> When my mom had diabetes I did not know all the details of what caused it, all the effects that diabetes causes. I didn't know that the eye, the kidneys and all of that.

Many cultural traditions were barriers to diabetes management. For instance, participants reported needing to make separate meals for the family, having to change their traditional cooking habits, and having to respect elders.

> And then he's so used to his own foods, it's been many years he's been eating that food and then to all the sudden say something, "no, you can't have that." It's like dealing with a grown-up child, you know, how you're gonna tell him you can't have this? You know, he's your dad and you're trying to at the same time please him but also in our culture you respect your elders and you can't always tell them no.

Other barriers to diabetes management included family obligations and lack of time due to work. Some participants could not find English resources in a predominantly Spanish-speaking community. Dangerous neighborhoods and distant proximity of exercise facilities decreased opportunities for physical activity. Healthy food was expensive, and fast food was readily accessible. Some participants reported the difficult emotional impact of diabetes and lacking motivation to seek out resources.

Resources for Care

Most participants reported a perceived lack of resources in their community to help manage their diabetes.

> It seems that before there used to be more, more frequent discussions. Before, there used to be more places. I think that there used to be more, or that now there are more people with these problems, that there isn't enough for everyone.

However, some participants did note resources for their diabetes care (Table 3). Church-based programs included access to a parish nurse, an exercise group at the church, church blood pressure screenings, and church health fairs. People identified personal support devices, such as blood pressure cuffs, glucometers, and home exercise machines. Some participants considered their friends and family a resource; however, their support was variable. Two participants mentioned the use of *nopales* (cactus), which is a commonly used alternative treatment for diabetes (Hunt et al. 2000). One participant noted it as a part of her diet, and another stated she was using it to treat her diabetes. Others mentioned utilizing various media sources for information. Neighborhood resources included nutrition, education, and exercise classes. Healthcare system resources included information at pharmacies, medical care, and educational classes in clinics. Some participants utilized clinics in Mexico to buy medications and receive medical care.

Preferred Content and Format of Church-Based Diabetes Program

Many participants affirmed their interest in church-based programming for diabetes.

> I'd like to see the church more, more involved with this one [program for diabetes] …if you want me to keep coming to this church I'd like to have programs to benefit myself.

> I would like them [diabetes programs] here at church…At church, so that the community can participate.

Table 4 presents participants' preferences for the types of information, skills, and interactions they desired in a church-based diabetes self-management program.

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Discussion

Participants were interested in church-based programming for diabetes and expressed many preferences for the types of information shared, the skills taught, and the social interactions desired in these programs. The authors used the findings from the focus groups to develop a conceptual model to inform the design of church-based diabetes interventions for Mexican-Americans. The proposed model describes how current resources can be integrated with community members' preferences to design tailored programs (Fig. 1).

Diabetes self-care management interventions can harness the church's social and organizational infrastructure. Churches offer spiritual and religious support and guidance, allowing for easier integration of spirituality into a diabetes intervention (Jurkowski et al. 2010). Also, the church often is a trusted and familiar setting to community members, thus mitigating many cultural barriers participants face in other settings (Lasater et al. 1997). Additionally, churches offer numerous resources useful for developing diabetes self-care management interventions such as social, cultural, educational, and advocacy activities (Castro et al. 1995; Lopez and Castro 2006; Duan et al. 2005; Baig et al. 2010). Churches also naturally convene community members (Lasater et al. 1997). In fact, several participants of the focus groups were not congregants of our partner churches. Due to their broad reach, church programs may be especially effective in engaging hard to reach members of the Latino community (Duan et al. 2005).

Church programs meet several preferences that participants desired in a diabetes program, such as information sharing, skill building, social interaction, and cultural tailoring. Many participants did not know local resources to support their diabetes care. To address this need, some churches already provide limited programs that focus on health, such as preventive screenings, lectures on health topics, and exercise classes (Castro et al. 1995). Additionally, participants desired interaction with peers, family, and church members to receive social support, learn ways to better manage their diabetes, and share problem-solving techniques. Churches provide many opportunities for people with diabetes to interact socially with community members. Our participants also wanted programs that were offered by local physicians or trained lay health leaders from their community. The church's strong volunteer base can facilitate the identification of peers to lead a church-based intervention. Such peer-led interventions may increase the likelihood that the intervention is offered in the participants' language and is tailored to the community's social and cultural context (Jones and Wells 2007).

However, churches may need to expand their function to better meet the needs of their community. Participants desired more information on the complications of diabetes and how to better manage their diabetes. Churches may need to expand current health screening activities to incorporate information on management of diabetes and prevention of complications. Many current church-based exercise and cooking classes may need to focus on persons with diabetes utilizing culturally familiar foods. Additionally, church-based diabetes programs might teach self-empowerment techniques for more sustained behavioral change and train how to emotionally cope with anxiety or depression around diabetes (Anderson 1995; Anderson et al. 1995). Churches can build upon their existing social network by bringing together people with diabetes to share and compare experiences and problem-solving techniques (Gorawara-Bhat et al. 2008).

Diabetes self-management education could be culturally tailored further by incorporating relevant spiritual messages. Previous studies have found that Mexican-Americans with diabetes believe faith plays an important role in their diabetes self-management and enables them to cope with their feelings about the disease (Hunt et al. 2000; Brown and Hanis 1999).

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However, no one in our focus groups expressed interest in incorporating spirituality or prayer into the diabetes self-management program. This omission was unexpected since faith can be very central to Latino culture (Pew 2007). Recruiting participants from churches may have influenced participants' lack of discussion around spirituality as an important part of a diabetes educational program, since incorporating faith into a diabetes education program may have been already understood as an important part of any program. We also did not explicitly query them on incorporating spirituality into the intervention, which may have further hampered discussion on the subject.

Previous studies have found that Latinos use alternative therapies in managing chronic diseases (Brown and Hanis 1999; Giachello et al. 2003). In our study, few participants mentioned alternative medicine therapies, for example use of herbs. No one mentioned the use of *curanderos*. Alternative therapy use might be underreported because of the stigma of alternative treatments and *curanderos* or because the researchers were from an allopathic academic medical center (Eisenberg et al. 2001). Other focus groups with Mexican-Americans with diabetes have found that while some participants consulted *curanderos* for health problems, most people generally did not consult them for diabetes-related care (Caban and Walker 2006; Hunt et al. 2000; Reyes-Ortiz et al. 2009). Many saw herbs as supplemental to medical treatments (Caban and Walker 2006; Hunt et al. 2000; Reyes-Ortiz et al. 2009).

Many components of a diabetes program can be readily addressed in the church setting, but there was also robust conversation around barriers to care outside the scope of a diabetes self-management program. Participants noted difficulty accessing health care, the high cost of medications and supplies, concerns about neighborhood safety, poor access to exercise facilities, limited access to healthy food in their communities, and the high cost of fresh foods. Within a church-based diabetes self-management program, these barriers could be addressed by providing information about low-cost food programs, discounted passes to exercise facilities, medication assistance programs for prescription drugs, linkages to safety net clinics that provide lower cost care, and partnerships with social service agencies that can connect people to local resources (Peek et al. 2007). For a church-based diabetes intervention to improve clinical outcomes in vulnerable populations, linkages with agencies outside the church are likely necessary (Baig et al. 2010).

While we found that most participants were interested in a church-based diabetes intervention, there may be some potential drawbacks to such programs. Organizational barriers may impede the formation of health education programs in churches, such as lack of funding or variation in church leadership support (Baruth et al. 2008). Since women have higher rates of church attendance, they may also be more likely to attend church health programs than men (Pew 2008). And while church-based interventions may allow people who are disenfranchised from the healthcare system to access services, these programs may still not reach Latinos who are inactive in the Catholic church or those who come from different denominations or faiths (Pew 2007). Unfortunately, data are lacking regarding the barriers to implementing health programs in Mexican-American Catholic churches, underscoring the need for further research in this area.

Our study has several limitations. Our focus groups were conducted with mostly Mexican-Americans from Catholic churches. While Mexican-Americans represent the largest population of Latinos in the United States and most Latinos in the United States are Catholic, our findings may not apply to all Mexican-Americans or to Latinos from different religious traditions (Pew 2007). Since our focus groups were based in one city and had mostly female participants, our findings may not be generalizable to people living in small or rural towns or to Mexican-American men.

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Our participants also had a higher level of education, income, and health insurance than national averages for Latinos, although the barriers they listed in receipt of care were similar to other studies with Latinos (Gary et al. 2003). Our participants may have given socially desirable answers during the focus group discussions, and some participants may have been more vocal than others. Yet, we found that the respondents repeated the same stories across the focus groups, reassuring us that we did capture the most common responses as well as a wide range of beliefs.

Conclusions and Implications

Churches offer an underutilized context for diabetes self-management interventions for Latinos. This study found that Mexican-Americans with diabetes and their family members were interested in church-based diabetes programs that provided information and skills on how to better manage their diabetes and opportunities for social interactions with peers. The proposed framework demonstrates that these requested components can be integrated into the current structure and function of the church. Additional mechanisms to facilitate access to medical care may be necessary to support community members' diabetes care. This integrated framework can be used to design and evaluate church-based interventions to improve diabetes outcomes among Mexican-Americans.

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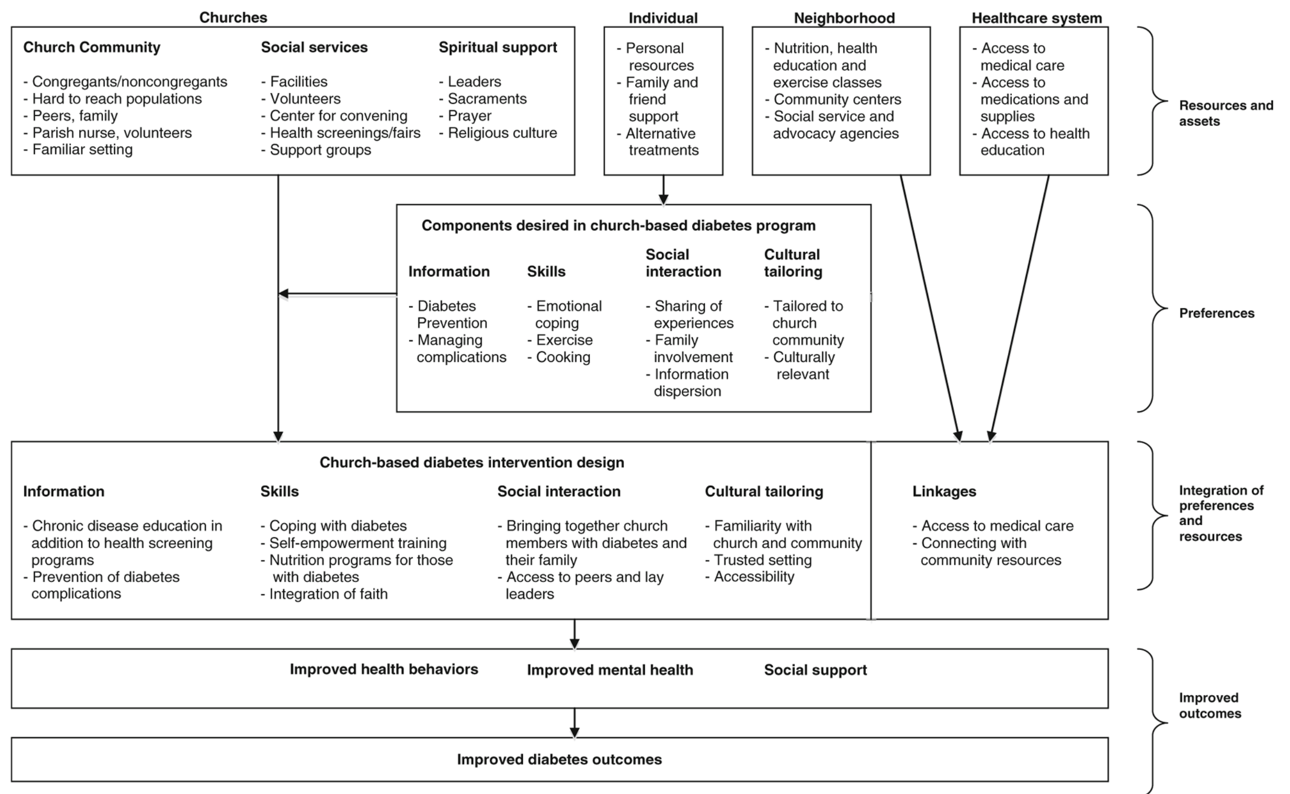

Fig. 1.

Framework for the design of church-based diabetes interventions for Mexican-American Catholics

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Table 1

Participant characteristics, $N = 37$

Demographics	*N* (%)
Age (mean, SD)	53 ± 11
Female	29 (78)
Married	20 (54)
Completed high school or general educational development (GED)	22 (60)
Have health insurance	21 (57)
Country of origin	
Mexico	30 (81)
United States	3 (8)
Other	4 (11)
Country of birth	
Mexico	22 (60)
United States	8 (22)
Puerto Rico	1 (3)
Ecuador	1 (3)
Other	3 (8)
Attend a Roman Catholic church	37 (100)
Years in United States (mean, SD)	34 ± 26
Primarily speak Spanish at home	26 (70)
Diabetes history	
Had a diagnosis of diabetes	24 (65)
Had an immediate family with diagnosis of diabetes[a]	26 (70)
Duration of diabetes in years (mean, SD) ($n = 24$)	12 ± 12
Take medication for diabetes ($n = 24$)	20 (83)

[a]Having a diagnosis of diabetes and having a family member with diabetes were not mutually exclusive categories

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Table 2

Barriers to diabetes care

Insurance	Difficulty attaining health insurance
	Losing health insurance
Cost	Cost of appointment with doctor
	Cost of health insurance
	Cost of exercise facilities
	Cost of bringing programs to church/community
Provider-related	Limited time with doctor at appointments
	Fear of being reprimanded by doctor
	Lack of information provided by doctor
	Lack of community involvement by doctors
Lack of information	Unhelpful advice from doctor
	Lack of information about causes, risks
	Lack of information about managing disease
	Lack of health education
	Not knowing where to go for help
	Resources harder to find in English
Social/cultural	Traditional cooking and eating habits
	Adjustment to American lifestyle (e.g., less walking)
	Respect for elders
	Needing to make separate meals for family
	Family obligations
	Time spent at work
Built environment	Dangerous neighborhoods
	Proximity of exercise facilities
	Accessibility to fast food
	Weather
	Cost of healthy food
Individual/psychological	Psychological/emotional impact of diabetes (e.g., anxiety, depression, stress)
	Lack of self-motivation
	Not seeking out available resources

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Table 3

Resources for diabetes care

Overall	Lack of resources
	Limited resources
Personal resources	Personal glucometers and blood pressure cuffs
	Exercise machine/treadmill
	Support from friend, family, peers with diabetes
	Alternative treatments
	Media outlets (e.g., TV, radio, Internet)
Neighborhood	Classes (e.g., Nutrition/cooking, exercise, education)
	Community and senior centers
	Community programs and classes
	Exercise facilities
	Pamphlets on diabetes
Healthcare system	Pharmacies
	Clinics offering medical care and referrals
	Clinic-based diabetes programs and classes
	Clinics in Mexico
Church	Parish nurse
	Programs/classes
	Health fairs

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Table 4

Preferred content and format of diabetes programs

Category	Themes	Example quotation
Information	Causes and risks of diabetes Prevention of diabetes Complications of diabetes Comorbidities of diabetes Nutrition	I think to understand how it affects us because unfortunately, many of us still don't understand how it affects us, we take it lightly. I'm talking in general terms, that many people … Right? They take it very lightly and the consequences are serious, and people don't really realize that it is not just one disease, but that it is linked to many other diseases I think the food is the big struggle from 1 day to another … I do feel that I'm ignorant at this subject. But I hear some people say: oh you can eat this but you can't eat that and then I hear other people say … you could eat this but you got to eat it this way and … I just don't know
Skills	Exercise Cooking Emotional coping Stress management Self-empowerment	I think it would be useful in our community one about cooking so we could learn to cook our favorite dishes that we like, but in a healthier manner. Because it is not that easy to switch from "sopes" to eating fish that we are not used to at dinner. So, in what ways our food can be healthier, I would like a cooking program I think it's a good idea, specially, you know, just using the word empowerment …. So, in other words … it's under control of the person not of the doctor. So, in other words, it's not like ok, well, I need to wait till the doctor tells me what I have to do. Here with empowerment and going to these classes, they are now putting it in your hands, so you're the one who controls how your diabetes is. It's either diabetes is gonna control you or you're gonna control your diabetes
Interaction	Family involvement Learning from shared experiences	A program would help us in simply to get out of the house, walk, and make new friends, right? Because we arrive and besides being home, just laying down For example, I think it's pretty neat to share recipes, right? That we are sick and say "Look, I eat this. I cook like this …" That is perfect; teach each other how we cook, and how to eat I think it's good for them [family] to come just to be a support to you, I mean, this is why I am here, it's just to kind of understand my father a little and too, you know, and it's also because, you know, 1 day, I don't know, maybe I will get diabetes and at least I'll know what to do when it comes. But for right now, it's a support for my father. I'm trying to help understand him and I think families need to come and, you know, just to support you as well
Tailored to population	Church-based Culturally tailored Age-appropriate Medical professional or trained peer Participatory Comprehensive	I would like them [diabetes programs] here at church. Yes, me too. At church, so that the community can participate At their level, because if someone is going to come here speaking big words, they are not going to understand well. But if someone from their level could come to their level, and tell them this and that, I think that will be good The only thing is that I think that if you have more people and they have different ideas [on a diabetes education class], we should get together with them some day and talk amongst us to see which is the, which idea we all, all of us share our ideas