Use of Focus Groups to Explore Nutrition Practices and Health Beliefs of Urban Caribbean Latinos With Diabetes

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OBJECTIVE — Although Caribbean Latinos are two to three times more likely than non-Hispanic whites to develop diabetes, cultural influences on nutrition and health are poorly understood. To provide insight into important features of diabetes prevention and management, we conducted focus groups to explore nutrition practices and health beliefs.

RESEARCH DESIGN AND METHODS — Thirty low-income urban Caribbean Latinos with non-insulin-dependent diabetes mellitus (NIDDM) and four family members participated in four focus group interviews that were conducted in Boston and Cambridge, Massachusetts. Interviews were conducted in Spanish, were tape recorded, and were led and analyzed by Latino professionals from a community-based health organization.

RESULTS — Consistent themes described by participants were feelings of social isolation, little understanding of long-term consequences of diabetes, fatalism regarding the course of the disease, multiple barriers to diet and exercise interventions, skepticism regarding the value of preventive health behaviors, prevalent use of traditional nonmedical remedies, and a clear need for culturally sensitive health-care providers and services.

CONCLUSIONS — The information from focus groups provides useful information for planning innovative intervention programs for chronic disease risk reduction that emphasize practical skills development, family/peer networks, empowerment techniques, and bilingual providers. We conclude that the focus group technique can be used effectively with low-income, urban minority populations to provide information on lifestyle behaviors and beliefs regarding chronic diseases that impact on health and nutritional status.

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NIDDM, non-insulin-dependent diabetes mellitus.

People of Latino origin develop non-insulin-dependent diabetes mellitus (NIDDM) at higher rates and at earlier ages than do non-Hispanic whites (1). The higher incidence of NIDDM relates to the strong influences of the Latino culture on dietary behaviors and exercise practices that adversely affect a variety of chronic diseases. Specifically, the Latino diet is relatively high in total and animal fat, and this combined with low levels of physical activity increases rates of obesity, dyslipidemia, glucose intolerance, and risk for NIDDM. In spite of these recognized relationships and evidence that nutrition and exercise interventions lead to improvements in body weight, blood glucose, and lipid levels among other diabetic populations (2–10), culturally sensitive programs for Caribbean Latinos, those from Puerto Rico and the Dominican Republic, have not been designed or evaluated.

Latinos are predicted to become the largest minority group in the U.S. during the next century (11). The lack of information regarding their health characteristics presents a serious barrier to planning effective diabetes treatment and intervention programs. We conducted focus groups with Caribbean Latinos living in Boston to identify nutrition and exercise practices, perceptions of diabetes, and the range of factors affecting diabetes management. Few reports of focus groups conducted among Hispanics exist in literature (12–14), and none have addressed issues related to diabetes.

RESEARCH DESIGN AND METHODS

— According to established practice (15), a planning group was formed, and key concept areas were outlined for the focus group interviews. For each area, a set of open-ended questions was developed to guide the interviewer and ensure that specific topics were given sufficient time for discussion. The discussion guide consisted of eight core questions with subsequent probing questions. Priority areas of the discussion guide were

Table 1—*Demographic characteristics of focus group participants*

	n	%
Sex		
M	12	35
F	22	65
Median age (years)	51 (range 23–86)	
Distribution within age ranges		
20–39 years	2	6
40–69 years	22	65
70+ years	10	29
Median duration of NIDDM (years)	15 (range 1–45)	
Country of origin		
Puerto Rico	32	94
Dominican Republic	2	6
Marital status		
Married	17	50
Widowed	9	26
Single	8	24
Employment status		
Employed	4	12
Unemployed	30	88
Confirmed NIDDM		
Yes	30	88
No (family members of diabetic individuals)	4	12

adjusted after the first interview was conducted. The protocol was approved by the Human Studies Committee of the Trustees of Health and Hospitals for the City of Boston and at The Cambridge Hospital.

Adult Latinos from Puerto Rico and the Dominican Republic who were >20 years of age and receiving health care at Boston City Hospital or one of two neighborhood health centers were invited to participate. Latinos with diabetes and their family members were recruited using Spanish and English flyers posted at health-care centers, community stores, and churches. Physicians and nutritionists at the health facilities encouraged participation. A representative from a Latino community health organization enrolled respondents into focus groups. Incentives were offered to participants, including child care at the group meeting, a fat-modified Latino meal, and a cash stipend.

Focus groups were conducted in Spanish over a 12-week period between June and August 1992. Locations were chosen based on the need for a relaxed and familiar environment that would encourage informal discussion. Focus group interviews were tape recorded and lasted 2 h. Time was adequate to establish group cohesiveness and explore each content area of the discussion guide.

Two trained Latino moderators conducted each focus group. Moderators were involved in the research from the outset as members of the planning group. Nonmedical moderators were chosen to maximize the likelihood for open and truthful responses. Moderators made notes during the sessions to provide supplemental information that was not captured on audiotapes. Tape recorded interviews were analyzed independently by each moderator, and notes were transcribed from the audiotapes. Concepts that were mentioned by more than one individual were identified, and it was noted when individuals sharing a common opinion, belief, or practice. Moderators considered actual words and phrases, tone, context, nonverbal responses, internal consistency of the group, and specificity of responses. Finally, independent reports were compared, consensus was reached, and summary statements were prepared.

A brief demographic questionnaire was administered at the conclusion of each focus group interview. The extent of the data collected was purposefully limited in order to minimize respondent burden, to maintain the informal and relaxed environment, and to understate the medical/health-care ties of the interview process.

RESULTS— Thirty Latinos with NIDDM and four family members were interviewed in four focus groups (Table 1). The median age of participants was 51 years (range 23–86 years). There were more women than men in three of the four focus groups. The majority of participants were from Puerto Rico, and most were unemployed. All participants had access to health care at one or more of our facilities. It is likely that, given the high rate of unemployment, health-care coverage for our participants was provided either by the Massachusetts Free Care Pool, Medicaid, or Medicare. Focus group participants had several years of experience living with diabetes, which is indicated by the median duration of 15 years. Table 2 summarizes the responses of focus group participants.

Social impact of diabetes

Nearly all participants agreed that diabetes had a strong negative social impact. Latinos with diabetes believed that they were unable to participate fully in daily activities varying from household chores to social gatherings. Activities requiring assistance (food shopping and label reading, insulin administration, foot care, and fingerstick monitoring) contributed to feelings of dependence on others. Most participants stated that the needs of a person with diabetes, particularly dietary needs, were frequently subordinated for

Table 2—*Summary of focus group responses*

Social Impact of Diabetes
Diabetes had a strong negative social impact
People with diabetes felt dependent on others
People with diabetes felt socially isolated
Health Impact of Diabetes
Diabetes was believed to worsen overall health
Long-term complications of NIDDM were poorly understood
High, stable blood sugar levels were acceptable
Nutrition Practices
Preventive nutrition behaviors were not valued
Diabetic diets were considered restrictive and boring
Preparing special foods for a diabetic individual was considered impractical
Foods prepared outside of the home were rarely eaten
Foods for a diabetic diet were too expensive
Standard diet therapy for diabetes was unrelated to Latino culture and lifestyle
Exercise Habits
Exercise was considered important for persons with diabetes
Improved prognosis was not an expected result of exercise
Walking and dancing were two favorite exercises
Barriers included fears of unsafe environments and physical side effects of exercise
Health Beliefs
Participants expressed fatalism regarding diabetes and its complications
Knowledge of blood glucose levels was not perceived as being important
A person's health was believed to be controlled by God
Traditional nonmedical remedies for treating diabetes were highly valued
Standard medical therapies were perceived as having undesirable side effects
Sources of Information
Opinions of other Latinos with diabetes were very important
Health-care providers who spoke Spanish were highly valued
Perceived Needs
Practical assistance with food preparation was needed
Support groups and education networks were needed
Suggestions for Future Programs
Improve cultural sensitivity of health-care providers
Plan cooking courses led by Latino peers with diabetes
Provide safe areas for exercise and community programs
Establish a diabetes-care facility in the community

the sake of the family. Diabetics perceived themselves as different from others at social functions involving food and alcohol.

Health impact of diabetes

The health impact of diabetes went beyond the common complaints of polyuria, polydipsia, and blurred vision. Participants complained of dizziness, fatigue, exhaustion, disrupted sleep, and leg cramps. They believed that diabetes adversely affected other medical conditions, including high blood pressure, asthma, and arthritis. Most expressed fears of disabling complications of diabetes such as blindness and amputations. There was little mention of other long-term complications of diabetes such as cardiovascular disease. A consistent opinion was that high but stable blood sugar levels were more desirable in terms of health impact than were glucose levels closer to the normal range but varied. Diabetes was perceived as a disease pervasive in current life, but not as a disease with reversible or long-term complications.

Nutrition practices

Most participants were unclear about the role of diet in the management of diabetes or long-term prognosis related to the illness. They perceived diabetic diets as restrictive and boring because they did not allow enough variety to enjoy oneself. They verbalized the need to reduce salt intake and to avoid sugar, fast foods, fried meats, canned foods, and simple starches such as rice, bread, pasta, and potatoes. They described moderation in food intake as the best approach to manage glucose levels, yet reported difficulties with controlling portion sizes. Participants reported occasional bouts of hunger, cravings for sweets, and the need to nap after meals. They reported having to eat many times during the day to keep blood sugars in line.

There was a consensus that it was impractical to cook different foods for the person with diabetes and for the rest of the family. Most participants believed that restaurant and processed foods were unhealthy for people with diabetes and rarely reported eating foods that were prepared outside of the home. Traditional Latino foods (rice, beans, meats, tropical fruits, and fresh vegetables) formed the foundation of the diet. There was a general perception that foods for a diabetic diet were expensive. Overall, standard diet therapy for diabetes was regarded as unappealing, irrelevant, and unrelated to Latino culture and lifestyle.

Exercise habits

All participants believed that exercise was important for someone with diabetes but had little sense that exercise would greatly improve their prognosis. Walking and dancing were two favorite ways to exercise. Barriers to exercise included fear of walking in an unsafe neighborhood and fear related to physical side effects such as leg pain or foot swelling. The desire to exercise was negated by the barriers of location, access, safety, and supervision.

Health beliefs

Participants articulated a strong sense of fatalism concerning the development of diabetes and its complications. There was virtually no perception that dietary patterns or physical inactivity played roles in the development of diabetes, its treatment, or its prognosis. Diabetes was considered to be inevitable if it was in the family. Self-monitoring of blood glucose levels was not believed to be important for avoiding diabetic complications. Participants reported that feeling well was often a higher priority to them than being cognizant of their blood glucose level. These attitudes and beliefs reflect an external locus of control that has been reported among other minority populations (16) and may be a significant barrier to achieving and maintaining lifestyle behavior changes.

Strong religious beliefs played an important role in health beliefs that seemed to override all other belief systems related to preventive health and nutrition behaviors. It was perceived that personal health was controlled by God in ways that were both positive ("God will give us strength to deal with diabetes") and negative ("Diabetes comes from God, and only God knows why we have this disease"). Diabetes was viewed quite fatalistically, as a problem that worsened health but had to be endured.

The use of traditional nonmedical remedies to treat diabetes was widely prevalent. Every participant reported using some type of traditional remedy, including native herbs, liquid mixtures or extracts, specific Latino foods, tropical fruits, and folk medicines. The practice of using bitter substances (i.e., boiled eggplant, grapefruit juice or skins, and lemon juice mixed with olive oil) to reduce blood glucose levels was common. Participants uniformly admitted that they did not tell their health-care providers about the use of traditional remedies for diabetes management.

Insulin was not regarded as beneficial for maintaining the health of diabetics. Many Latinos believed that insulin increased the severity of the disease and that insulin dose and complications of diabetes affecting eyes and feet were proportional and related. Other complaints associated with insulin therapy included weight gain, dizziness, nausea, and memory loss. Thus, standard medical therapies were perceived as having undesirable side effects, whereas traditional Latino remedies were perceived as being acceptable and useful.

Sources of information about diabetes

Focus group participants exhibited a consistent willingness to try management approaches that were reported to be successful by other Latinos with diabetes. This was true for standard medical therapies and particularly was the case for traditional remedies. Health-care providers who spoke Spanish were given more credence than those who did not.

Perceived needs of Latinos with diabetes

Participants identified a need to develop practical skills for identifying, purchasing, and preparing healthy foods. Support groups and organized meetings located within the neighborhood where persons with diabetes and their family members could receive education and support were requested.

Suggestions for future programs

There was widespread agreement that health-care providers and nutritionists should learn more about the Latino culture, including folk remedies, dietary practices, and foods specific to their country of origin. Participants requested cooking courses led by Latino peers to teach them how to cook traditional foods using healthier preparation methods. Safe areas for community programs and easy exercise routines for weight control were needed. Establishing a specialized diabetes center where patients and their families could receive diabetes services and support was strongly suggested.

CONCLUSIONS — The focus group interview was a qualitative, cost-effective method of obtaining in-depth information from a homogeneous peer group in a relaxed environment that encouraged an open discussion of feelings, attitudes, beliefs, and practices. We believe that our findings apply to an urban population of low-income Caribbean Latinos. These data need to be interpreted carefully, and our conclusions cannot be generalized to Latinos from all socioeconomic levels. Because focus groups involve small numbers of individuals and the sampling techniques are not often scientific (17–19), it is important to further this research with quantitative data and to conduct studies that include Latinos from broader socioeconomic backgrounds.

Major issues related to diabetes were *1*) feelings of social isolation and dependence on others, *2*) a temporal focus on the present with little understanding of long-term consequences of diabetes, *3*) a strong sense of fatalism about the course of the disease, *4*) a lack of clarity about the role of diet and exercise in treatment and prognosis, *5*) an inability to adopt and maintain recommended dietary patterns and exercise regimens because of multiple barriers, *6*) skepticism regarding the value of preventive health behaviors, *7*) widely prevalent use of traditional nonmedical remedies to treat diabetes, and *8*) a strong need for appropriate health-care services and programs that are sensitive to the Latino culture. These findings indicate that management of diabetes and adoption and maintenance of healthy lifestyle behaviors pose challenges for this group of urban Caribbean Latinos. Intervention program planners need to consider the cultural norms, belief systems, and potential barriers that influence behavior to design effective strategies for population-based risk reduction and health promotion for Caribbean Latinos.

Common themes of fatalism and skepticism have been previously reported among other Hispanic focus group participants (13,14). The belief that preventive

measures were ineffective in preserving health was found to be dominant among groups of Mexican-Americans (14) and Puerto Ricans (13). Among Mexican-Americans, a broad lack of preventive health-care knowledge and a strong apprehension toward learning about chronic diseases was identified (14). Our application of these findings to diabetes health care will facilitate the development of appropriate intervention programs for Latinos.

The focus group technique was successful in identifying important health beliefs and nutrition practices of urban Caribbean Latinos with diabetes. The recognition that diabetes and its complications are significant sources of morbidity and mortality among Caribbean Latinos, coupled with the lack of existing research on intervention programs for risk reduction among this population, warrant qualitative investigations as preliminary research for planning survey and intervention activities. Interventions for Latinos must emphasize practical skills development, formalized family/peer support systems, empowerment techniques, and bilingual health-care providers.

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