Published in final edited form as:

Hisp Health Care Int. 2012 June 1; 10(2): 93–100.

Salud de Corazon: Cultural Resources for Cardiovascular Health among Older Hispanic Women

Adriana Perez, ANP, PhD,

2009-2011 John A. Hartford Foundation Claire M. Fagin Postdoctoral Fellow, Arizona State University, College of Nursing and Health Innovation

Julie Fleury, RN, PhD, FAAN, and

Hanner Professor and Director, PhD in Nursing and Healthcare Innovation, Arizona State University, College of Nursing and Health Innovation

Nelma Shearer, RN, PhD

Associate Professor and Co-Director, Hartford Center of Geriatric Nursing Excellence, Arizona State University, College of Nursing and Health Innovation

Abstract

The prevalence of cardiovascular disease risk factors in Hispanic women has been substantiated across studies. While many studies have focused on the impact of these risk factors, few qualitative studies have addressed cultural and contextual meanings of cardiovascular health promotion in this population. This research explored cultural resources for cardiovascular health promotion among older Hispanic women. A qualitative descriptive methodological design using focus groups with 7 Hispanic women was used. Culture provided an overarching perspective, guiding identification and choice of resources and supports in order to promote cardiovascular health. Themes included Living Tradition, Caring for Family, Connecting with Friends, Having Faith, and Moving as Life. Data provide an initial step toward generating a more complete understanding of perceived cultural resources for cardiovascular health in older Hispanic women. Researchers and clinicians are increasingly recognizing that individuals, families and communities uniquely define cultural and contextual meaning of cardiovascular health promotion.

Keywords

Hispanic Women; Cardiovascular Health Promotion; Cultural Resources; Older Adults

Background

The number of people aged 65 and older in the United States (U.S.) has increased tenfold in the last century and is expected to double in the first part of this century (Administration on Aging, U.S. Department of Health and Human Services, 2010). Women, who comprise the majority of older adults, are often poorer than men, live alone, and typically suffer from an increased number of chronic health conditions (Administration on Aging, U.S. Department of Health and Human Services, 2010). Over the last three decades, scientific initiatives have brought increased attention to older women's health issues. However, much of this research has not addressed, or contributed significantly to understanding the health issues facing older Hispanic women (Perez, Fleury, & Keller, 2010). Since 1998, the Office of Women's

Health reported that cardiovascular disease was the number one cause of death and disability for women in the U.S. Although a decline in cardiovascular disease mortality has been reported in recent years, minority women have not shared in this decline, particularly Hispanic women (Crescioni, Gorina, Bilheimer, & Gillum, 2010; Lloyd-Jones et al., 2010). It is expected that if current trends continue, cardiovascular disease could increase among Hispanic women over the next 20 years, as the population ages.

The prevalence of cardiovascular disease risk factors in older Hispanic women, including obesity (body mass index [BMI] ≥ 30), physical inactivity, adverse blood lipid profiles, hypertension, and diabetes mellitus (DM) have been substantiated across studies. Although the prevalence of obesity is increasing in all populations, racial/ethnic groups are affected disproportionately (Smith et al. 2005). In the U.S. approximately 70% of older adults are classified as obese with non-Hispanic Blacks and Mexican Americans showing a higher prevalence rate by almost 10% (Wang & Beydoun, 2007). Hispanic women also report lower levels of physical activity, particularly leisure-time physical activity, compared to non-Hispanic white women. Slattery and colleagues (2006) examined physical activity patterns in mid-life and older Hispanic and non-Hispanic white women. They found that while Hispanic women reported more housework, occupational work, dependent caregiving, and dancing, only 25% reported meeting moderate-intensity physical activity recommendations compared to 35% of non-Hispanic white women.

Hypercholesterolemia has been found to increase with age (Wong, Lopez, Tang, & Williams, 2006) and among Hispanic women rates are higher for those that are Spanish-speaking compared to English-speaking (Eamranond et al., 2009). The prevalence of hypertension also increases with age (Hispanics aged 55 to 64 are 47%; those between 65 to 74 68%; and 75% for those 75 and older) and detection, awareness and control remain poor among Hispanics (Ostchega, Yoon, Hughes, & Louis, 2008). Data from the National Health and Nutrition Examination Study (2005–2008) show the prevalence of Type 2 DM is 66% higher among Hispanics compared to non-Hispanic whites (Center for Disease Control & Prevention, 2011). Hispanics have a higher prevalence of hyperinsulinemia (Li et al., 2006), higher Hemoglobin A1C values and are less likely to self-monitor blood glucose levels (Wen, Parchman, Linn, & Lee, 2004). Qualitative research with Hispanic women has focused on exploration of barriers, facilitators and perceptions of cardiovascular health promotion (Berg, Cromwell, & Arnett, 2002; Juarbe, Turok, & Perez-Stable, 2002). Overall, studies found that cardiovascular health promotion is important to Hispanic women. Facilitators include family, social support, past success, body image, and access to resources. Barriers include family obligations, fatigue, lack of motivation, and lack of time.

Qualitative data provide a basis for understanding cardiovascular health promotion determinates and experiences from the perspective of Hispanic women. However, few studies have provided an understanding of the role of cultural resources which promote and sustain healthy lifestyles in older Hispanic women. The recognition of cultural resources as strengths provides a basis for the development of relevant interventions designed to promote cardiovascular health in older Hispanic women.

Integrating research on Hispanic women into the women's health agenda is important for two reasons. First, if relevant and effective interventions are to be developed with the goal of reducing or eliminating racial and ethnic disparities, then the cultural resources and strengths inherent in this population must be better understood. Second, research targeting the cultural resources and strengths of Hispanic women provides an opportunity to advance scientific knowledge related to resources promoting the health of vulnerable populations. Perez and Fleury (2009) have emphasized that research targeting the prevention and management of

cardiovascular disease must be broadened to address the role of cultural factors, including cultural resources for cardiovascular health promotion among Hispanic women.

In their report from the 2003 Minority Health Summit, Benjamin and colleagues (2005) emphasize the importance of culturally relevant research targeting minority women, due to high levels of cardiovascular risk factors and mortality rates in these groups. Further, the application of new paradigms of research and development of culturally relevant theories of health promotion which acknowledge cultural resources and strengths, rather than a deficit oriented approach individual to health promotion, have been emphasized as key to reducing health disparities. Given the limited data on effective cardiovascular health promotion interventions for Hispanic women, it is imperative that we generate formative understandings of the cultural resources and strengths which promote cardiovascular health among this underserved and vulnerable population.

Purpose

Hispanics are now the largest minority group in the country, comprising 12.5% of the population, with more than 40 million Hispanics living in the continental U.S. (Census, 2000) Hispanics will continue to be the fastest growing minority group, expecting to constitute at least 25% of the U.S. population by the year 2050 (Census, 2000). The 2.2 million older Hispanic adults are expected to increase to more than 15 million over the next 40 years, making this the largest elder group in the U.S (Administration on Aging, U.S. Department of Health and Human Services, 2010). This level of growth combined with the projected trend in cardiovascular disease among older Hispanic women makes it imperative that researchers and health care providers focus on understanding factors related to cardiovascular health promotion in older women. Given the aging of Hispanic women and their increased risk for cardiovascular disease, it is important to explicate factors that may relate to or foster health promotion consistent with cardiovascular disease risk reduction. Culture has been identified as central to planning, implementation, and evaluation of health promotion programs (Airhihenbuwa & Obregon, 2000). However, we know relatively little about relevant cultural strengths and resources for cardiovascular health promotion among older Hispanic women. Thus, the purpose of this research was to explore perceived cultural resources for cardiovascular health promotion among older Hispanic women. An understanding of these resources may be instrumental in creating relevant and needed interventions to reduce cardiovascular risk.

Methods

Design

Qualitative description incorporating focus groups was used to gain a deeper understanding of perceived cultural resources promoting cardiovascular health among older Hispanic women (Sullivan-Bolyai, Bova, & Harper, 2005). Descriptive qualitative methods foster description of participant experiences in everyday language with minimal interpretation (Sandelowski, 2000). Focus group discussions were used to encourage women to provide descriptions in their own words.

Sample

Purposive sampling was used to recruit women age 50 and older, who self-identified as Hispanic/Latina; able to hear and respond to questions in either the Spanish or English language, who were participating in community Senior Congregate Meal Sites which serve older adults, and interested in participating in a discussion about heart health. The goal of purposeful sampling was to obtain cases deemed information-rich for the purposes of the study. The sample size and configuration was consistent with our focus on the intensive

study of particulars around perceived cultural resources for cardiovascular health promotion among older Hispanic women.

Procedures and Data Collection

Two focus groups were conducted in groups of 3–4 participants using a discussion guide with specific, open-ended questions. The focus groups were held in private meeting rooms, and included healthy snacks, juice, and coffee offered prior to the start of the focus groups. Focus groups were conducted in Spanish, to allow for relevance in primary language, and facilitated by a bilingual, bicultural moderator. The open-ended questions were constructed to guide discussion on perceived cultural resources for cardiovascular health promotion. Broad questions allowed women to independently elaborate cultural resources, and actions that fostered cardiovascular health promotion. Each focus group session lasted approximately 120 minutes, which allowed sufficient opportunity for all participants to respond to the questions. Open-ended questions included: “What does it mean to have a healthy heart?” “How does your culture help or prevent you from having a healthy heart?” “What types of resources help you to maintain a healthy heart?” “Whom do you turn to in your efforts to take care of your heart?” “What kinds of support or encouragement do you get?”

Prior to beginning the study, human subject approval was obtained from the university Institutional Review Board and procedures for the protection of participants were followed throughout the study. All women were informed that their participation in the study was voluntary and that they were able to withdraw from the study at any time. A letter of consent to participate was signed prior to the start of the focus group interview, written in their language of literacy, English or Spanish. Participant recruitment efforts included presentation of the study at Senior Congregate Meal Sites by investigators and Senior Congregate Meal Site staff during meal times and scheduled activities. To facilitate participation in the study, the frequency, duration, and extent of participation were clearly communicated during recruitment. A flyer was distributed which described the purpose of the study and specifically targeted Hispanic women who met study inclusion criteria. An initial telephone screening of the participants confirmed eligibility. Participants were paid \$20 in appreciation for their time. Prior to data collection, training, including reviewing the interview guide and practicing interview techniques was conducted.

All focus group sessions were audio taped, with typed transcripts used as a basis for data analysis. Written field notes were recorded following each focus group session, to record the context and impressions, and to describe the social exchanges that occurred around the interviews. Fieldwork methods included investigator observation and interpretation of the research setting and participant verbal and nonverbal communication before, during, and following focus group interviews (Spradley, 1979). The same Hispanic interviewer conducted recruitment, follow up telephone calls, and focus group interviews.

Demographic data was collected from participants prior to interviews through the use of standardized questionnaires. Sociodemographic variables included the following: (1) age in calendar years; (2) socioeconomic status measured as monthly income; and (3) the highest number of years of schooling completed.

Data Analysis

Qualitative content analysis guided description of both verbal data and field notes and fostered the identification of data codes and the emergence of data categories, and included an iterative approach and constant comparison in data analysis (Hsieh & Shannon, 2005). Qualitative content analysis was used to capture and extend knowledge and understanding of

cultural resources for promoting cardiovascular health among older Hispanic women. Data analysis took place at two levels. In the first level, 2 researchers reviewed the statements from the focus group interviews to understand the data in context. In the second level, data were coded across transcripts using the constant comparison method, to group related concepts into categories. Typed transcripts were used as a basis for data analysis; the authors read the transcripts independently, and developed initial coding schemes.

Focus groups were conducted in Spanish. Transcription and translation, including forward translation, were conducted by native Mexican American speakers with experience in translation, reconciliation, back translation, as well as back translation review and cognitive debriefing (Wild et al., 2005). These steps supported the quality and accuracy of translation, level of comprehensibility, content relevance, and the conceptual equivalence of the translation. Identified categories were shared and discussed by team members. Data were then classified to formulate distinct categories and synthesize themes of meaning. Discussion and analysis continued until agreement on the categories was reached and we were satisfied that the categorization presented was the best fit for the data. Field notes were used to record the context of focus groups, and to link context to the data generated. Process and analytic memos were used to document decisions about data interpretation and the patterns identified in analysis. Presentation of data categorization with cultural experts allowed us to challenge emergent theorizing and refining theoretical linkages.

Results

Given the specific scope of the study, and to allow for an in-depth exploration of cultural meaning, 7 participants were interviewed. Of the seven participants, only one was born and raised in the U.S. Five participants were born in Mexico and one was born in Puerto Rico. Two participants had some college education ($M = 11.2$ years of education, $SD = 3.6$) and six reported an annual income of less than \$15,000, while 1 participant reported an annual income of \$24,000 or more. All participants reported Spanish as their primary language. The mean age of participants was 67 years ($SD = 3.2$) and the mean number of people living in the household was 2.4 ($SD = 1.2$). All participants reported only 1 person in the household contributing to income and 3 reported children living in the home.

Recognition of cultural resources for cardiovascular health promotion among Hispanic women emerged through women's words, their descriptions of their cultural beliefs, resources and behavior, social support, and symbols important to the group. Consistent with study aims, themes describing perceived cultural resources for cardiovascular health promotion reflect beliefs, values, supports, and behaviors. Culture provided an overarching perspective, guiding identification and choice of heart healthy behaviors that include physical activity resources, strengths, and supports. Themes included Living Tradition, Caring for Family, Connecting with Friends, Having Faith, and Moving as Life. Data provide an initial step toward generating a more complete understanding of how perceived cultural resources may promote cardiovascular health in older Hispanic women.

Living Tradition

Women stated that their own cultural values, beliefs, and traditions were significant resources that influenced their efforts for cardiovascular health promotion. Participants spoke of cultural norms and traditional roles for Hispanic women that emphasized the importance of family and acceptable behaviors for women. For example, "*las mujeres especialmente no deberían fumar*," smoking is considered outside the norm for women and can "*harm the heart and lungs*." For some, the role of caregiver and the center of the family motivated and provided opportunities for physical activity to maintain a healthy heart. For example, "*cuando cuido a mis nietos siempre corro atras de ellos...pienso que eso ayuda a*

bajar peso.”Caring for children and grandchildren was viewed as an expectation, “*tradicionalmente el trabajo mas importante para la mujer Hispana,*”and traditionally the most important job for a Hispanic woman. “*El corazon es muy importante,*”overall, women valued the health of their heart because this strengthened their role as mother and as caregiver, and felt that they needed to stay healthy and able to care for their children and husbands, and participate actively in their lives. “*Mi madre tambien nos cuida,*”they learned personal strength and how to care for everyone from their own mother. The value of traditionalism was reflected in description of their role as women in caring for family and others, as well as their cooking to demonstrate care for others. “*Todo lo que aprendi a cocinar incluye verduras, ingredientes naturales, todo fresco.*”They shared traditional family recipes that included fresh vegetables and ingredients. These cultural values reflected socially inherited ways of being which fostered cardiovascular health promotion.

Caring for Family

Women spoke of the ways in which their cultural perspective of family shaped their approach to cardiovascular health promotion. Participants felt that family should be their first priority, “*la familia primero.*” As one woman noted, “Since the time we are young, they gear our education to focus on being a good mother.” Connection with the family and the community, including caring for others, appeared to be important to women for whom meaningful roles included giving to others and being needed by others. Even though women did much for others, they agreed that family support was very helpful in maintaining cardiovascular health promotion efforts especially because family and friends can offer companionship during walks or other activities. One woman lived with her daughter, and stated that they took care of each other. “They are always watching over me,” she said, “making sure that I keep all my appointments with my doctor.” Another woman agreed and said that love for the family is a motivator to stay healthy. “Thinking about them keeps me going,” she said. She believed that in a family everyone takes care of each other. Caring was expressed as their love for family meaning all family, including extended family members. Mother’s cooking, “*la comida de mi madre,*”was discussed as a core value which reflected women’s active roles in cooking and caring for their family. Women spoke with pride about cooking at a young age with their mother, and how “*la comida de mi madre*”was used to nurture the family. Women reminisced about what they remembered from their own mother’s cooking, and the ways in which bringing the family together around meals was a support and comfort, as well as an opportunity to teach their family about how to keep “*salud de corazon.*”

Connecting with Friends

Women described the role of friends as promoting cardiovascular health promotion efforts as a shared understanding of challenges which fostered support and the generation of needed resources. The women talked about playing bingo, sharing snacks, sewing, and singing songs as types of activities that they shared, and which helped them to reduce stress that is “*bad for the heart.*”These activities and interactions created a forum for communication, and promoted a sense of strength and hope that fostered ability to participate in cardiovascular health promotion. The time spent together helped to promote support and relieve stress; interaction with others also kept women “moving” in ways consistent with cardiovascular health promotion. “*Siempre me siento major despues de salir a caminar con mi vecina Elena.*”Women spoke of time spent outside talking to neighbors, and catching up on the news of the day. For several, the connection with friends ensured that they maintained healthcare provider appointments and they shared knowledge of free resources for heart health. One woman noted, “*nos cuidamos las dos...yo se todo lo que toma para la presión,*” while another said, “*ella me enseño todo lo que aprendió en su clase de diabetes.*”This contact kept them socially engaged as well as supported in their efforts to stay healthy.

Having Faith

Women agreed that having faith in God and believing in Him gave them personal strength in cardiovascular health promotion. For these women, religion served as a guide for daily living, interactions with others, and formed the center of social activities within the community. Women believed that having “*fe en Dios*,” or faith in God and believing in Him gave them personal strength in dealing with difficult situations and maintaining “*salud de corazon*.” Some shared that “*oración diaria*” helped to keep stress and blood pressure controlled. A few of the women wore a cross on their necklace or a symbol of the Virgin of Guadalupe, a patron saint for many Hispanics. One participant stated “*I pray to God every day, asking him to bless me with good health*.” She referred to God as the “*espíritu Santo*” and made the sign of the cross as she spoke, sharing how this kept her at peace without stress to affect her heart.

Moving as Life

Participants defined physical activity as “*moverse*,” moving. Participants stated “*me gusta ser activa en la casa*,” staying active with various types of physical activity including caring for the home, yard, and family as a source of pride and central to good heart health. Women expressed pride in their view of themselves as active, and noted that they consciously sought opportunities to be physically active during their day. Participants compared themselves with Anglo women, noting that while Anglo women spent a lot of time in the gym, Hispanic women were active in different ways. “*Back home in Mexico, the gym was only for movie stars, famous people*,” this woman noted, “*I am very active with housework*.” Another stated “*we wash all of our clothes by hand, and when I was young I would even chop wood*.” Two of the women spoke of being active in their garden. Women stated that they used arms and upper body to rake leaves, and legs to pick up trash and rocks and that this helped them to “keep moving” to have a healthy heart. Participants emphasized the importance of physical activity as doing something good for their mind and body through the joy of moving. Women expressed the cultural value and tradition of movement, particularly through dance, that allowed them a culturally acceptable and enjoyable way to stay physically active, while still spending time with family and friends.

Discussion

A challenge for researchers and clinicians working with older Hispanic women includes a lack of understanding regarding the relationship of cultural strengths and resources related to health care practices (Soto et al., 2000). This research responds to the need for research among Hispanic women, and provides valuable insight to cultural resources for cardiovascular health promotion, that build upon and expand current understandings of cultural values, experiences, and beliefs. These elements may be used to identify strategies specific to the health promotion of vulnerable groups. The identification of cultural strengths and resources are consistent with the findings of Fleury and colleagues (2009), in which culture provided an overarching perspective for examining the importance of physical activity, traditional roles and norms, the role of support and the family, and the identification and use of community and environmental resources.

According to Castro and colleagues (1999), within the core of “*La Cultura Hispana*” or “Hispanic Culture” exist a set of “traditional values” that remain strong in the form of Spanish language, family beliefs and practices, and patterned social interaction. This cultural worldview is central to behavior, knowledge and beliefs about heart health. The findings from this study support previous research and strengthen understanding of the role that cultural resources play in the health of Hispanic women (Fleury, Keller, & Perez, 2009; McCarthy, Ruiz, & Gale, 2004; Padilla, & Villalobos, 2007).

Consistent with our findings, Delgado (2002) noted that Hispanic women take pride in their ability to care for themselves and their family, their cooking and tidy home. Spousal and caregiver roles are among the most significant issues in promoting health among Hispanic women (Gonzales & Jivorec, 2001; Laffrey, 2000). In many cases, Hispanic women also serve as the financial and emotional support for the family while being expected to maintain many of the cultural traditions and responsibilities. Family and kinship networks can provide important links in the development and implementation of culturally relevant health promotion programs. Indeed, *familismo*, a strong attachment and commitment to the family network has been noted as a core value in the Hispanic culture (Marin & Marin, 1991). Using family members to support and encourage physical activity behavior can facilitate maintenance, and support cardiovascular risk modification efforts. In spite of the stressors inherent in caregiving, family was noted to be a significant source of support in maintaining a healthy heart for many of the participants. Mier and colleagues (2007) found that family was both a source of support for health behavior, as well as a critical motivator due to the need to be healthy to care for family members. Women viewed the family as a support system in caring for each other, and as a motivating factor in taking care of themselves.

Women also felt that that being socially active helped to promote a healthy life in general. They actively sought connection with other Hispanic women, and relied on one another for the support, friendship, and shared experiences essential to health. *Personalismo*, or respect for personal relationships in the Hispanic culture, may foster these connections. Gonzales and Keller (2004) identified the role of the *gran amiga* (great friend) as a motivator for physical activity. Social support has been shown to be especially relevant among Hispanic women compared to other ethnic groups, and correspond to higher levels of physical activity which helps cardiovascular health promotion (Fleury, Keller, & Perez, 2009; Keller, Allan, & Tinkle, 2006). Marquez and colleagues (2004) found that social support to exercise from friends contributes to participation in leisure time physical activity among Hispanics.

Having a positive attitude and a strong faith in God was viewed as central to promoting heart health. All of the women in this study identified religion as a strength in helping them to maintain a healthy heart. Previous studies found that spirituality and religious practices are common themes among Hispanic women when discussing health (Higgins & Learn, 1999). Other researchers found connections between use of prayer and a spiritual life as strengths in dealing with stress (Musgrave, Allen, & Allen, 2002).

Participants acknowledged the importance of physical activity in their lives, and the relevance of particular activities, such as dancing, which enhanced both physical and emotional well being that ultimately help to promote cardiovascular health. Lifestyle activity noted by participants involved primarily house work and yard work. Activities most often reported by older Hispanic women in other studies included walking, dancing, and gardening (Laffrey, 2000). Yoho and Ezeobele (2002) provide ethnographic data describing meanings of health in older Hispanic women as including independence, taking care of self, and being active through housework, gardening, chores, and exercise.

Qualitative research is needed which moves beyond a focus on individual perceptions of barriers to cardiovascular health promotion to an exploration of cultural strengths and resources which may promote cardiovascular health, as well as generate essential “localized understandings” of cardiovascular health promotion as a basis for intervention design. Such efforts are particularly significant for capturing women’s perceptions of cultural resources as well as determining the feasibility of innovative methods to promote such resources. Successful intervention design requires an integrative understanding of the unique cultural perspectives, characteristics, and resources of the target population, as well as the theoretically relevant determinants of behavior that can be transformed into culturally

sensitive behavior change strategies.(Resnicow, Braithwaite, & Dilorio, 2002; Yoho & Ezeobebe, 2002)

Limitations

Study findings are limited to older Hispanic women in good health residing in an urban setting. Further, women had access to Senior Congregate Meal Sites, which may provide an important supportive resource for older adults. Geographic, demographic, and environmental factors may have influenced women's perceptions of cultural resources for cardiovascular health promotion.

Summary and Implications

Researchers and clinicians are increasingly recognizing that individuals, families and communities uniquely define cultural and contextual resources for cardiovascular health promotion. The awareness of diversity in America has a profound effect on all aspects of society, and the cultural limitations of intervention models may limit their effectiveness in this changing environment. Promoting cardiovascular health among diverse cultural groups requires an awareness and acknowledgment of cultural resources and values underpinning the behaviors of the target group. Ultimately, cardiovascular health intervention strategies that fail to elicit, understand, and acknowledge the unique resources of ethnic groups may not be successful in their efforts to facilitate and sustain healthy behaviors among individuals in the larger society.

Health promotion intervention efforts must better reflect the cultural meaning, strengths, and resources unique to older Hispanic women. Building upon literature which emphasizes the importance of cultural resources and strengths, data generated offer elements that are useful to develop interventions designed to promote the cardiovascular health of older Hispanic women. The insights shared by the women in this study provide a more complete understanding of how Hispanic women know, describe, and interpret cardiovascular health promotion, and related cultural and contextual resources, and provide an essential step in refining and focusing community-based interventions to better meet the needs of older Hispanic women.

Acknowledgments

Funding: This report was supported by NIH/NINR Grant F31NR010049-01A1 pre-doctoral fellowship and a John A. Hartford Foundation Building Academic Geriatric Nursing Capacity Scholarship. These awards support the research and academic work underpinning the scientific training of the primary author, Dr. Adriana Perez.

References

- Administration on Aging, United States Department of Health and Human Services. A profile of older Americans: 2010. Washington, DC: 2010.
- Airhihenbuwa CO, Obregon R. A critical assessment of theories/models used in health communication for HIV/AIDS. *Journal of Health Communication*. 2000; 5(15)
- Benjamin EJ, Jessup M, Flack JM, Krumholz HK, Liu K, Nadkarni VM, et al. Discovering the full spectrum of cardiovascular disease: Minority health summit 2003: Report of the advocacy writing group. *Circulation (New York, NY)*. 2005; 111(10):e124–e133.
- Berg JA, Cromwell SL, Arnett M. Physical activity: Perspectives of Mexican American and Anglo American midlife women. *Health Care for Women International*. 2002; 23(8):894–904. [PubMed: 12487704]
- Castro, FG.; Proescholdbel, RJ.; Albeita, L. Addictions: A comprehensive guidebook. New York, NY: Oxford Press; 1999. Ethnic and cultural minority groups; p. 499-526.
- Census. Redistricting data. Washington, D.C: United States Bureau of the Census; 2000.

- Center for Disease Control & Prevention. Data Sources, Methods, and References for Estimates of Diabetes and Prediabetes. 2011. Retrieved June 2011, from <http://www.cdc.gov/diabetes/pubs/references11.htm>
- Crescioni M, Gorina Y, Bilheimer L, Gillum RF. Trends in health status and health care use among older men. *National Health Statistics Report*. 2010; 21(24):1–18.
- Delgado, J. *Salud: A Latina's Guide to Total Health*. New York, NY: Rayo: Harper Collins Publishers; 2002.
- Eamranond P, Legedza A, Diez-Roux A, Kandula N, Palmas W, Siscovick D, Mukamal K. Association between language and risk factor levels among Hispanic adults with hypertension, hypercholesterolemia, or diabetes. *American Heart Journal*. 2009; 157(1):53–59. [PubMed: 19081396]
- Fleury J, Keller C, Perez A. Exploring resources for physical activity in Hispanic women, using photo elicitation. *Qualitative Health Research*. 2009; 19(5):677. [PubMed: 19380503]
- Gonzales A, Keller C. Mi familia viene primero (my family comes first): Physical activity issues in older Mexican American women. *Southern Online Journal of Nursing Research*. 2004; 5(4):21.
- Gonzales BCS, Jivorec MM. Elderly Mexican women's perception of exercise and conflicting role responsibilities. *International Journal of Nursing Studies*. 2001; 38:45–49. [PubMed: 11137722]
- Higgins PG, Learn CD. Health practices of adult Hispanic women. *Journal of Advanced Nursing*. 1999; 29(5):1105–1112. [PubMed: 10320493]
- Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qualitative Health Research*. 2005; 15(9):1277–1288. [PubMed: 16204405]
- Juarbe T, Turok XP, Perez-Stable EJ. Perceived benefits and barriers to physical activity among older Latina women. *Western Journal of Nursing Research*. 2002; 24(8):868–886. [PubMed: 12469724]
- Keller C, Allan J, Tinkle MB. Stages of change, processes of change, and social support for exercise and weight gain in postpartum women. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*. 2006; 35(2):232–240.
- Laffrey SC. Physical activity among older Mexican American women. *Research in Nursing & Health*. 2000; 23(5):383. [PubMed: 11052392]
- Li C, Ford ES, McGuire LC, Mokdad AH, Little RR, Reaven GM. Trends in hyperinsulinemia among nondiabetic adults in the U.S. *Diabetes Care*. 2006; 29:2396–2402. [PubMed: 17065674]
- Lloyd-Jones D, Adams RJ, Brown TM, Carnethon M, Dai S, De Simone G, Ferguson TB, et al. Heart disease and stroke statistics – 2010 update: a report from the American Heart Association. *Circulation*. 2010; 121:e46–e215. [PubMed: 20019324]
- Marin, G.; Marin, B. *Research with Hispanic populations*. Newbury Park, CA: Sage Publications; 1991.
- Marquez DX, McAuley E, Overman N. Psychosocial correlates and outcomes of physical activity among Latinos: A review. *Hispanic Journal of Behavioral Sciences*. 2004; 26(2):195–229.
- McCarthy MM, Ruiz E, Gale BJ. The meaning of health: Perspective of Anglo and Latino older women. *Health Care for Women International*. 2004; 25(10):950–969. [PubMed: 15513801]
- Mier N, Medina AA, Ory MG. Mexican Americans with type 2 diabetes: Perspectives on definitions, motivators, and programs of physical activity. *Preventing Chronic Disease*. 2007; 4(2):A24. [PubMed: 17362615]
- Musgrave CF, Allen CE, Allen GJ. Spirituality and health for women of color. *American Journal of Public Health* (1971). 2002; 92(4):557–560.
- Ostchega Y, Yoon SS, Hughes J, Louis T. Hypertension Awareness, Treatment, and Control — Continued Disparities in Adults: United States, 2005–2006. *NCHS Data Brief*. 2008; 3:1–8. [PubMed: 19389317]
- Padilla YC, Villalobos G. Cultural responses to health among Mexican American women and their familias. *Family Community Health*. 2007; 30(1S):S24–S33. [PubMed: 17159629]
- Perez A, Fleury J. Wellness motivation theory in practice. *Geriatric Nursing*. 2009; 30(2 Suppl):5–20. [PubMed: 19215807]
- Perez A, Fleury J, Keller C. Review of interventions promoting physical activity in Hispanic women. *Western Journal of Nursing Research*. 2010; 32(3):341–362. [PubMed: 20040732]

- Resnicow, K.; Braithwaite, R.; Dilorio, C. Applying theory to culturally diverse and unique populations. In: Glanz, K.; Rimer, BK.; Lewis, FM., editors. *Health behavior and health education*. San Francisco: Jossey-Bass; 2002. p. 485-509.
- Sandelowski M. Focus on research methods: Whatever happened to qualitative description? *Research in Nursing & Health*. 2000; 23(4):334–340. [PubMed: 10940958]
- Slattery M, Sweeney C, Edwards S, Herrick J, Murtaugh M, Baumgartner K, Guiliano A, Byers T. Physical activity patterns and obesity in Hispanic and non-Hispanic white women. *Medicine & Science in Sports & Exercise*. 2006; 38(1):33–41. [PubMed: 16394951]
- Smith SC, Clark LT, Cooper RS, Daniels SR, Kumanyika SK, Ofili E, et al. Discovering the full spectrum of cardiovascular disease: minority health summit 2003: report of the obesity, metabolic syndrome, and hypertension writing group. *Circulation*. 2005; 111:e134– e139. [PubMed: 15769755]
- Soto FG, Kane WM, Going S, Ford ES, Marshall JR, Staten LK, et al. *Camine con nosotros: Connecting theory and practice for promoting physical activity among Hispanic women*. *Health Promotion Practice*. 2000; 1(2):178–187.
- Spradley, JP. *The ethnographic interview*. New York: Holt, Reinhart, & Winston; 1979.
- Sullivan-Bolyai S, Bova C, Harper D. Developing and refining interventions in persons with health disparities: The use of qualitative description. *Nursing Outlook*. 2005; 53:127–133. [PubMed: 15988449]
- Wang Y, Beydoun MA. The obesity epidemic in the United States – gender, age, socioeconomic, racial/ethnic, and geographic characteristics: a systematic review and meta-regression analysis. *Epidemiologic Reviews*. 2007; 29:6–28. [PubMed: 17510091]
- Wen L, Parchman ML, Linn WD, Lee S. Association between self-monitoring of blood glucose and glycemic control in patients with type 2 diabetes mellitus. *American Journal of Health-System Pharmacy*. 2004; 61(22):2401–2405. [PubMed: 15581263]
- Wild D, Grove A, Martin M, Eremenco S, McElroy S, Verjee-Lorenz A, Erikson P. Principles of good practice for the translation and cultural adaptation process for patient-reported outcomes (PRO) measures: report of the ISPOR Task Force for translation and cultural adaptation. *Value in Health*. 2005; 8(2):94–104. [PubMed: 15804318]
- Wong ND, Lopez V, Tang S, Williams GR. Prevalence, treatment, and control of combined hypertension and hypercholesterolemia in the United States. *American Journal of Cardiology*. 2006; 98:204–208. [PubMed: 16828593]
- Yoho MJ, Ezeobele I. Health and meaning: A perspective of geriatric Hispanic women. *Geriatric Nursing (New York)*. 2002; 23(5):268–271.