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HEALTH CARE ACCESS AMONG HISPANIC IMMIGRANTS: ¿ALGUIEN ESTÁ ESCUCHANDO? [IS ANYBODY LISTENING?]

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Abstract

This systematic review identified 77 studies to examine patterns and determinants of health care access among Hispanic immigrants (HI) living in the U.S. In spite of major mental and physical care needs, HI and their families are at very high risk of not having access to health care compared with non-immigrant Hispanics and non-Hispanic whites. Noncitizenship status is a major barrier for accessing health care due to program ineligibility and fear of stigma and deportation. Low English proficiency is also an important barrier to health care. Culturally appropriate community outreach programs relying heavily on community health workers, also known as promotoras, have improved health care access and quality. Mexico shares the health care cost for HIs living in bordering states, calling for a binational dialogue. Mixed-methods research is needed to better understand: a) the net influence of acculturation on migrant health; b) the role of informal (e.g., family) vs. formal (e.g. promotoras) social support at facilitating health care access; c) issues related to ‘single’ male migrant farm workers; d) the “Hispanic mortality paradox”; e) traditional healing and medicine among HI. Comprehensive health and immigration reforms are needed to respect the human right that HIs have to gain access to health care.

According to the Behavioral Model of Health Service Use (BMHSU) (Andersen 1995), the key factors determining health care utilization are: sociodemographic characteristics (e.g. immigration status), enabling resources (e.g., health insurance), and need for health care (e.g., illness). This article examines health care access among Hispanics from the BMHSU perspective with special emphasis on migrant farm workers, one of the most vulnerable and isolated groups in the U.S. (Pérez-Escamilla 2010). It also highlights the influence of immigration status as noncitizen or undocumented status that has consistently been identified as a risk factor for lack of access to healthcare (Durden and Hummer? 2006, Heyman et al. 2009, Horton 2004, Lauderdale 2006, Martinez and Carter-Pokras 2006, Ortega et al. 2007). Furthermore, parental noncitizen status has been identified as a major risk factor for lack of health care access even for families with children who are US citizens (Berk et al. 2000, Flores et al. 2006).

Hispanic communities are indeed growing at a very high rate and continue to experience major social injustices and poor health outcomes in spite of the major social, economic, cultural, and political contributions that this group has made and continues to make to the U.S. Thus, addressing health care access among Hispanics (i.e., individuals residing in the U.S that originate from over 20 different Spanish speaking countries in Latin America and the Caribbean, with the majority coming from Mexico) has major public health implications

as this group currently represents 15.5% of the U.S. population. And by the year 2050 it is expected that one-out-of every four individuals living in the U.S. will be of Hispanic origin (Pérez-Escamilla 2010).

This article first examines health care access among Latino children and youth followed by health care access issues among women, Hispanic adults facing diverse medical conditions including diabetes and cardiovascular disease, oral health problems, and infectious diseases such as HIV and tuberculosis. For each topic, we present a community-based program that has attempted to address health care access among difficult-to-reach Hispanic groups. The article discusses the role of social support, coping strategies, including ethnomedicine and traditional healing, and seeking health care in Mexico. It concludes with policy and research recommendations based on a synthesis of study design limitations of studies reviewed.

Literature Review Methods

Two online databases, PubMed and ISI Web of Science, were utilized to identify articles in the field of health care access among Latinos published in the last 10 years (between July 1999 and July 2009). The following Medical Subject Headings (MeSH[®]) were used for PubMed: Health Services Accessibility, Insurance, Health, Health Personnel, Transients and Migrants, Emigrants and Immigrants, Hispanic Americans. The key words used for search in ISI Web of Science included health care, health insurance health personnel, transients, migrants, emigrants, immigrants, Hispanic Americans, and Latinos. Only articles in English were selected. The search yielded 43 PubMed articles, and 71 Web of Science articles; 4 articles were duplicated. The articles abstracts were reviewed by two of the authors (RPE and DS) and ranked for relevance. Those classified as ‘relevant’ (i.e., examined health care access among Hispanics) or ‘possibly relevant’ (examined health care access but not clear if Hispanics were included (vs. ‘not relevant’ (unrelated to health care access or excluded Hispanics)) were considered for inclusion. The full articles were then reviewed and divided into four initial categories: (A) barriers/facilitators for health care, a category which was further divided into pediatric care (n=11 studies), women’s care (11 articles), cardiovascular diseases and diabetes (9 articles), dental care (7 articles), mental health care (11 articles), HIV, STDs and TB (6 articles), health insurance and access (38 articles), and preventative care (4 articles); (B) coping strategies, which includes emergency room use (5 articles), traditional remedies, religion, social support, (9 articles), as well as conceptual programs designed to facilitate health care access (7 articles); (C) solutions; for legal residents (26 articles), undocumented immigrants (8 articles), farm workers (7 articles), and (D) areas for future research (4 articles). Some articles were represented in two or more categories or subgroups. The 77 final articles were selected based on their relevance for understanding Latinos’ access to insurance and health care providers, with emphasis on migrant farm workers and citizenship status. The last step involved integrating the articles into the following Hispanic health care access topics: children and youth care, women’s health care, chronic disease care, oral health care and HIV/tuberculosis.

Results

Children and Youth Care

Hispanic children have less access to health care than their counterparts belonging to other ethnic/racial groups. This may be explained by a combination of factors including poverty, immigration status, unfavorable labor policies, language barriers, discrimination, geographical isolation, acculturation status, and the complex interrelationship among them (Flores et al. 2002, Flores et al. 2006, Pérez-Escamilla 2010). Van Wie et al. (2008) concluded from Current Population Survey data that even though uninsurance rates among 1–18 y old Hispanic children declined from 28.2% in 1996 to 22% in 2005, uninsurance

rates were still higher among Hispanic children in both time periods. Multivariate analyses identified noncitizenship status among children or at least one parent as independent risk factors for child uninsurance. Durden (2007) documented, based on the 1999–2001 National Health Interview Survey, that 0–17 y old Hispanics were significantly less likely than their non-Hispanic white counterparts of receiving usual health care from a doctor's office (vs. clinic/emergency room). This relationship was mediated by immigration and acculturation variables, including mother's nativity, time living in the U.S., and citizenship status.

Hispanic children of immigrant farm workers are at risk of the worst health outcomes and are more likely to be uninsured compared to Hispanic children whose caretakers are not involved in agricultural activities. Furthermore, children from migrant farm workers (i.e., seasonal agricultural workers that move around the U.S. during the year) are at even greater risk for not having access to health care. Rodriguez et al. (2008) found that the caretaker's level of education and amount of time living in the U.S. were inversely associated with the risk of being uninsured among Hispanic children under 18 years; analyses were based on the Department of Labor National Agricultural Worker Survey. One-third of the children in this sample were uninsured, with significant differences by migration status: 45% of migrant vs. 30% of non-migrant parents. Weathers et al. (2003) examined health care access among Hispanic children less than 13 years old of migrant farm workers living in rural North Carolina. Over three-quarters (77%) of the caretakers self-reported to be undocumented, and 62% of the children were born in Mexico. The proportion of children without insurance was 73% or 5.5 times higher than the corresponding average rate for the U.S. Over half of caretakers (53%) reported that the children had unmet medical needs during the previous year, vs. 2.2% for U.S. children on average and 3.4% among Hispanic children in general. One-third of the migrant children had never had a well child examination, and 79% had never been treated by a dentist. These findings indicate that Hispanic children of migrant farm workers have very limited access to health care, and the study also documented that when they received it was to treat and not to prevent illness. In the same sample, Weathers et al. (2004) found that the caretaker's lack of transportation (51%) and not knowing where to go (20%) were the two top reasons given for why migrant children were unable to meet their health care needs. Furthermore, very high caretaker pressure to work (i.e., having great difficulty taking time off from work for the child's medical appointment because of possibility of losing a job as a result) was independently associated with the risk of having a child with unmet health care needs (OR=5.9). As many as 40% of the caretakers reported having very high pressure to work, highlighting the priority need to improve labor policies affecting migrant farm workers.

Nahouraii et al. (2008) found that Hispanic migrant women, recruited from churches in rural North Carolina, who received instrumental (help making dental appointment), material (help getting to dental appointment) or emotional support (someone accompany to dental appointment) mostly from relatives/friends, were 3.1 times more likely to have brought their 1–11 year old children to see a dentist. In this sample, 47% of children had dental insurance and 43% had never received dental care. Three-quarters of the caretakers did not have medical insurance and 78% spoke Spanish only, highlighting the importance of social support for improving health care access among migrant children living in rapidly emerging Hispanic communities.

The U.S.-Mexico border is a space that presents an opportunity to examine the transnational choices that Hispanic farm workers make regarding health care for their children. Understanding these dynamic health care seeking behaviors can help improve health care access among children from migrant farm workers living in different regions of the U.S. (Flores et al. 2002). Seid et al. (2003) found, in a sample predominantly drawn from Head Start sites in two California counties located at the U.S./Mexico border, that over half of the

health care of children from farm workers was obtained in Mexico. Surprisingly, even though lack of health insurance was given as the top reason for seeking care in Mexico, children with health insurance reported receiving about half of their health care in Mexico. Parents' perceptions of primary health care quality (measured with the P3C score, a 23-item scale that yields a total score, as well as subscale scores for health care continuity, access, contextual knowledge, communication, comprehensiveness, and coordination) were significantly better among families with insured children, and among those with children receiving most of their care in Mexico. An interaction between these two factors suggested that uninsured children who received most of their care in the U.S. had worse P3C scores compared with uninsured children receiving most of their care in Mexico or insured children receiving care in either country. With regards to the P3C subscales, parents of insured children reported a longer relationship to a regular provider or place of care and better accessibility. Caretakers of children receiving most care in Mexico also reported greater accessibility and receiving primary care that was more coordinated. Communication and comprehensiveness scores were the worst for uninsured children getting most care in U.S. compared with their uninsured counterparts getting most care in Mexico and insured children. Respondents identified insurance status, accessibility and cost, and preferring health care in Mexico among the top reasons for seeking care there. These findings suggest that incorporating some of the positive aspects of the health care system in Mexico to the U.S. health care services to farm workers throughout the U.S. may increase the quality of care in the children belonging to this very vulnerable group. For example, the authors suggest that allowing physicians with M.D. degrees from Latin American and Caribbean to practice in non-profit community clinics may help increase the access of farm workers and their families to culturally appropriate approaches to health care.

Studies have consistently shown that lack of U.S. citizenship for the children and/or their caretakers is a major barrier for adequate health care access among Hispanic children (Flores et al. 2006). Thus, an important question is: Why does this happen in such a systematic way? First, policies undoubtedly play a role. For example, on one hand, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) restricted Medicaid eligibility for non-U.S. citizens, including individuals who have been US residents for less than 5 years. Likewise the 2005 Deficit Reduction Act calls for rigorous citizenship verification via birth certificate or passport, a policy that represents a barrier not only for undocumented or recent immigrants but also for authorized immigrants who may not have easy access to these documents. On the other hand, the authorization in 1997 of the State Children's Health Insurance Program (SCHIP) has been associated with increased health insurance coverage among children that do not qualify for health insurance through other programs (Van Wie et al. 2008). Also, insurance rates among children of Hispanic farm workers vary substantially across regions depending on state-specific resources and eligibility criteria. Thus, pursuing initiatives such as enhanced health insurance portability and reciprocity of Medicaid benefits can help address this gap (Rodriguez et al. 2008). Second, the fear of deportation is likely to limit health care access seeking behaviors from Hispanic caretakers, even if their children were born in the U.S. and are thus entitled to be covered through programs for U.S. citizens (Casey et al. 2004). Indeed, fear of deportation experienced by Hispanic immigrants has been shown to lead to greater emotional distress among undocumented Mexican immigrants (Cavasoz-Rehg et al. 2007).

Parental acculturation has consistently been positively associated with health care access among Hispanics. It is possible that cultural isolation among migrant farm workers driven in part by linguistic and lack of understanding of the new complex systems (Harari et al. 2008), in a context of severe poverty, represents a significant barrier to health care access. Given the high vulnerability among immigrant workers and their families, it is important to discuss potential solutions to the major health care access gaps faced by children from these

communities. The Los Angeles Healthy Kids Program (LAHKP) proved to be successful at improving health care access to more than 40,000 children, with immigrant Hispanic children representing the great majority. LAHKP was launched in 2003 with Proposition 10 dollars (coming from cigarettes tax) to provide health insurance to uninsured children 5 years old or younger living in families with an income below 300% of the poverty level and who were ineligible for Medical coverage. In 2004, the upper age limit for program enrollment was expanded, with funding from philanthropic organizations, to cover uninsured children who were younger than 18 years old. LAHKP included: (a) culturally appropriate community outreach and enrollment assistance; (b) comprehensive medical, dental, and behavioral health benefits managed through a non-for profit health plan; (c) sliding-scale monthly premiums and co-payments; and (d) assigning lower enrollment priority to children covered by employer-sponsored insurance.

A rigorous four-year evaluation of LAHKP (Hill et al. 2008) showed that the program reached the most vulnerable children, as 86% of new enrollees lived in households below the poverty level, 91% were noncitizens, and in 71% of the households Spanish was the language spoken. Despite the fact that 91% lived in households with at least one parent employed, only 9.9% of the households received employer sponsored dependent health insurance coverage. The evaluation also demonstrated that LAHKP improved health care access including ambulatory and preventative care. Parental satisfaction was high with 61.4% of caretaker of enrolled children reporting feeling very confident in obtaining needed care for their children (vs. 31.3% before enrollment). In spite of its success as a demonstration project, LHKP has faced important challenges with regards to sustainability and scaling-up. For example, funding for the 6–18 year old children quickly dried up, illustrating the need to not solely rely on philanthropic funds to address health care access gaps (Frates et al. 2003). This is a major challenge as older noncitizen children are at higher risk than their younger counterparts to lack health coverage (Flores et al. 2006). Comprehensive health care reform legislation is needed to extend health care coverage to all children irrespective of their immigration status.

In sum, children of farmer workers represent a highly vulnerable group when it comes to lack of health care access. Incentive policies are needed to foster the development of health care infrastructure in close proximity to where farm workers live and the offer of health care services at non-traditional hours (Weathers et al. 2004). Also, changes in farm worker medical leave labor policies are needed to diminish the fear of losing a job for missing work due to the need to bring a child to receive health care (Weathers et al. 2004). In addition to policy measures, community outreach efforts can go a long way to overcome well-documented barriers including: misunderstanding of eligibility guidelines, complex application forms and processes, lack of enrollment sites in rural areas, and fear of deportation (Flores et al. 2006, Rodriguez et al. 2008, Weathers et al. 2004).

Women's Health Care

Even though Hispanic women have a lower incidence of breast cancer, the case-mortality ratio is higher than among their non-Hispanic white counterparts. Lack of access to timely screening leading to late detection may partially explain this finding. Palmer et al. (2005) conducted a mammography cross-sectional study among Hispanic women of 50 years or older residing in *colonias* with high density of farm workers. All women were interviewed in Spanish, 78% were born in Mexico, two-thirds reported not having health insurance and only 38% self-reported to have adhered to breast cancer screening guidelines (mammography within the two years preceding the interview). Health insurance (OR=3.6), higher self-efficacy (OR=2.1), and higher decisional balance (OR=2.5) were independently associated with mammography adherence. Studies have also shown that lack of citizenship and lower acculturation levels are associated with an increased risk of not following

recommended mammogram and cervical cancer screenings among Hispanic immigrant women (Echeverria and Carrasquillo 2006). Although a lack of insurance may be part of the explanation (Carrasquillo and Pati 2004), lack of cultural competence in outreach efforts may also be playing a role (Owusu et al. 2005, Johnson et al. 2008).

Language barriers have been linked to mental health outcomes. A study conducted in Philadelphia found that “inadequate English literacy” was associated with depression severity (PR=2.39) among Hispanic pregnant women (Bennett et al. 2007). The prenatal and perinatal period is a vulnerable time in women’s lives, this being especially true for those women that do not have adequate social and emotional support such as single or young Hispanic immigrant mothers to be. Hazard et al. (2009) conducted a qualitative evaluation of the Hispanic Labor Friends (HLF) initiative in Utah. HLF were Hispanic mothers trained to support their peers through pregnancy, delivery and the early post-partum period. Program participants were Spanish speakers, unmarried or adolescents, with limited education and access to social support. In-depth interviews showed that the HLF program was culturally competent and provided needed support. One participant stated, *“It was if my mother was there [during the birth]. My mom was so happy to hear that she [the peer support person] was here with me. I really think God sent her so I didn’t feel alone.”* HLF were also greatly appreciated by the nurses as illustrated by the following quote *“They’re like friend, co-workers. They’re very much a part of the team. I don’t know what we would do without them. They’re such a great asset to us. Our roles are complimentary.”* Nurses acknowledged the fact that HLF services went way beyond simple language translations: *“The commitment of the HLFs, it’s more helpful than just translation services. It really helps just to have someone stay with the woman throughout their labor, which can go from one minute to many, many hours.”* Thus, it was not surprising that nurses also found that HLF improved health care quality as illustrated by the following quote *“...Sometimes we think we can communicate with them with their little bit of English and our little bit of Spanish. But you get a HLF and it’s a totally different story. We can more adequately tell what’s going on with them, what their needs are, their pain level. They end up getting better care.”* Results suggested that HLFs played the role of both cultural brokers and health care facilitators. An additional finding from this study was that post-partum depression was common among the program clients. However, many of them could not be supported because they would not come back for their 6-week maternal check-up, illustrating one of the major challenges facing health care delivery to highly mobile underserved population groups.

Chronic Disease Care Access

The previous sections focused on maternal and child health care access, a period during the lifecycle when primary prevention should be offered. When these efforts fail, the result is an adult population suffering a very high prevalence of chronic diseases. Thus, it is important to address chronic disease health care access among Hispanics.

Type 2 diabetes (T2D) is twice as common among Hispanics as among their non-Hispanic white counterparts representing a major excessive burden of disease, disability and premature mortality in this ethnic group. An analysis of 1999–2002 NHANES data showed that among Hispanics low language acculturation was associated with diagnosed T2D and peripheral neuropathy complications but paradoxically with a lower BMI (Mainous et al. 2006). Hispanics with low language acculturation were also more likely to lack health insurance, a routine source of health care, and to have lower levels of education. Eamranond et al. (2009) found in the Multi-Ethnic Study of Atherosclerosis (MESA) that Hispanics who spoke Spanish at home or had lived for less time in the U.S. and had hypertension, high LDL cholesterol or diabetes had worse metabolic control of their conditions compared with their more acculturated counterparts. In this study Spanish-speaking Hispanics had less

education, were poorer, more likely than their English-speaking counterparts to be uninsured, more likely to have been born outside the U.S., and to have lived for less time in the U.S. Mainou et al (2007) found in their analysis of adults with diagnosed diabetes participating in the 2003 National Health Interview Survey (NHIS), that Mexican-Americans had less knowledge about glycosylated hemoglobin than Puerto Ricans (OR=0.24) and other Hispanics (OR=0.15). Among Hispanic immigrants, Mexican-Americans were significantly less likely than Puerto Ricans (OR=0.13) and other Hispanics (OR=0.09) to have only one doctor for their diabetes care and management. These findings suggest that Mexican-Americans have less stable diabetes care access than their Puerto Rican counterparts.

It has been well documented that Mexican immigrants often times receive health care in Mexico (Brown 2008). However the extent to which this happens and the reasons and implications associated with this health seeking behavior are just beginning to be examined. Wallace et al. (2009) estimated based on the 2001 California Health Interview Survey (CHIS) that close to half a million (5.5%) Hispanic immigrants living in California sought care in Mexico. Factors independently associated with seeking medical care in Mexico (excluding dental and prescription drugs) were uninsurance, noncitizenship, living closer to the border, lower acculturation, lack of usual source of care, being sad, or having any of five chronic conditions. Thus, medical need as well as availability, accessibility and cultural attributes were important factors influencing seeking health care in Mexico. Results suggest that efforts targeting the development and implementation of sound binational health insurance plans are likely to improve health care access among Hispanic immigrants. These initiatives need to be culturally competent to yield meaningful results (Kim-Godwin et al. 2006).

Hispanic immigrants with chronic diseases or associated risk factors are at significantly higher risk of not having adequate health care access if they have low levels of acculturation. Special emphasis is needed to reach out to Hispanic immigrants afflicted by these conditions through culturally and literacy appropriate health education and health care services. This is an approach that could benefit substantially from patient navigators and community health workers, also known as promotoras (Balcazar et al. 2009, Heuer et al. 2004, Weiler and Crist 2009). A community health agency serving Hispanic migrants provides some insights through a piloted diabetes program in nine nurse-managed health centers serving seasonal Hispanic farm workers in Minnesota and South Dakota (Heuer et al. 2004). The culturally sensitive model included diabetes lay educators (DLEs) that organized support groups and delivered home-based education. Program implementation was linked with major improvements in diabetes prevention and care screening services. The need for this program was evidenced as among participants with diabetes included in the 3-year evaluation study, 91% had T2D, average annual household income was less than \$10,000, and only 13% had any type of medical insurance. The percent of migrant workers with diabetes who had their blood glucose measured at least once increased from 60% to 94% during the three-year evaluation period. Likewise the proportion of patients who got tested for the presence of 11 co-morbidities or risk factors increased from 2–52% to 76–96% during the same period of time. There were also dramatic improvements in access to treatment for different diabetes-related ailments. The program was successful in large part because it took into account community, medical, cultural and socio-economic needs and was delivered by a multidisciplinary community- and clinic-based diabetes team. It also involved a strong collaborative of community-based agencies, and an academic institution, migrant workers advocacy groups, and the federal government. As a side benefit, the program also served the role of exposing regional health care professionals and university students to Hispanic farm workers needs.

Oral Health Care

Hispanic immigrants confront major oral health care barriers. A study in rural Illinois (Lukes and Miller 2002) found that nearly half of English speaking Hispanic farm workers interviewed in a community health center had periodontal disease. Yet 51% had not received oral health care in the previous year. The study participants mentioned lack of pain or discomfort as the primary reason for not seeking oral health care. Reported barriers for oral health care were: limited clinic hours (57%), cost (33%), and lack of transportation (17%).

Studies have consistently shown that acculturation is positively associated with access to preventive and prophylactic dental care among Hispanic adult immigrants (Graham et al. 2005, Riley et al. 2008) and their families (Quandt et al. 2007). A phone survey conducted in Miami among four Hispanic subgroups (Cuba, Nicaragua, Colombia and Puerto Rico) found that those who spoke English at home were more likely to have a regular dentist (Graham et al. 2005). Consistent with these findings, a random-digit dialing survey conducted in South Florida (Riley et al. 2008) showed that among Hispanics reporting tooth pain and/or painful oral sores, speaking English more often was associated with having a usual dentist, having less oral pain, having less difficulty eating and sleeping, and experiencing less depression. Likewise, a study conducted with Hispanic immigrant farm workers in North Carolina showed that lack of family dental care and poor teeth condition among children was positively associated with low acculturation measures (Quandt et al. 2007).

HIV and Tuberculosis

Infectious diseases, such as TB, HIV/AIDS, and other STIs, affect Latinos disproportionately in the United States (CDC 2009a, 2009b; Lopez-Quintero et al. 2005). Compared to other racial/ethnic groups, Latinos have the highest prevalence of TB, which account for 29% of all cases (CDC 2009b). The rate of HIV infection is two times greater in Latino men than in white men and four times greater in Latina women than white women (CDC 2009b), and is the fourth leading cause of death among 35–44 y old Latinos (CDC 2009a). CDC has identified Hispanics as being at high risk for HIV testing avoidance because of fear of embarrassment, rejection and stigma associated with this condition. Prevention and care for HIV/AIDS and other STIs in Latinos are challenged by factors such as poverty, migration patterns, social structures, language barriers, immigration status and inadequate health insurance (CDC 2009a and 2009b).

Studies have identified HIV-testing related barriers encountered by Latinos (Lopez-Quintero et al. 2005, Horwitz et al. 2008). Lopez-Quintero et al. (2005) examined the 2000 NHIS to compare HIV-testing among different Hispanic subgroups. Compared to Puerto Ricans, Mexican (OR=1.59) and Mexican-Americans (OR=1.61) were more likely to have never been tested for HIV. This difference may be due to the difference in migration patterns and levels of acculturation that affect both stigma and access to health. Indeed, this study found that less acculturated participants were significantly more likely (OR=1.25) to never have had an HIV test.

Adherence to treatment for infectious and chronic infectious disease is also a challenge. Aranda-Naranjo et al. (2000) documented a mismatch between access to and adherence to HIV treatment among migrant and seasonal farm workers with some claiming that they had discontinued their treatment because of adverse side effects. In another qualitative study, Wyss and Alderman (2006) also identified environmental, cognitive, and social barriers for screening, diagnosis and treatment of Mexican migrant workers with TB in Ohio. Political, economic and socio-cultural alienation have been shown to make migrant farm workers vulnerable by limiting their access and adherence to treatment for TB. Ailinger et al. (2006)

found a decrease in adherence to TB treatment in Latino immigrants from 98% adherence at 2 months to 72% adherence at 9 months. It is possible that major physical (e.g. financial status, daily work schedule, and transportation) and social constraints (family support, coworkers, community, and health professionals) shape a “fluid lifestyle of migrant culture” that may have negative effects on adherence (Wyss and Alderman 2006).

Stigma and discrimination related to HIV/AIDS and TB have been reported as barriers to access to health care in several studies, including testing and treatment (Aranda-Naranjo et al, 2000, Horwitz et al. 2008). In a focus group study on Mexican female immigrants conducted in Albuquerque, New Mexico, Horwitz et al. (2008) found that stigma was a major barrier for women to receive care for “stigmatizing illnesses,” including AIDS, STIs, TB, mental illness, and cancer. Although in some cases social networks and support were linked to positive relationships with the health system, in other cases HIV-related “stigma has been found to affect one’s perceived social support negatively and indirectly to increase one’s emotional distress” (Horwitz, et al., 2008: 858). Thus, access to health services is not simply an issue related to health policy because persons with HIV/AIDS, STIs and TB also encounter cultural barriers to testing and treatment. This study documented notable difference in perceived stigma when women compared the experiences in Mexico with those in the U.S., with the vast majority of their comments reflecting stigma as a barrier to health services related to Mexico.

Socio-cultural interventions and public health marketing campaigns have addressed some of the documented barriers, in an attempt to improve HIV testing rates (Olshefsky et al. 2007). The *Tú No Me Conoces* (You Don’t Know Me) campaign carried out on the California-Mexico border focused on increasing HIV risk knowledge among Latinos and incentivizing HIV testing. Messages were tailored to address cultural barriers including machismo and gender as it has been argued that gender inequalities ‘may play a role in Latina’s self-efficacy to be conscious of her risk and take measures to find out if she is [HIV] positive’ (Olshefsky et al. 2007:432). Indeed, the campaign message related to infidelity was recalled the most, especially among women.

Testing and treatment of HIV/AIDS, STI and TB in Hispanic and immigrant populations impacts the general U.S. population. Lack of screening and treatment for infectious diseases among vulnerable subgroups represents a public health risk for the American population as a whole. In the case of Hispanics, male immigrants may be more prone to engage in intercourse with sex workers while in the U.S. and to establish families in both the United States and in their native country (Hirsh 2003). Thus, it is important to acknowledge that lack of health promotion education, HIV testing and treatment among immigrants (documented and undocumented) represents as national security and public health concern for both Latin America and the U.S. Because of the roles that social support and stigma play in the decision making process of disenfranchised individuals with regards to communicable diseases health seeking behaviors this topic is being addressed in the following section.

Social Networks, Support, Stigma and Health of Latinos

Social support and networks are complex factors that influence a variety of health issues related to Latino and immigrant populations. These include dental care (Nahouraii et al. 2008), mental health, sexually transmitted illness, and cancer (Horwitz et al. 2008). Studies have found that different types of support have different influences on health outcomes.

Social networks have been found to have both positive and negative effects on illness-related *stigma*. In a Mexican population of women living in New Mexico, Horwitz et al (2008) found that social networks might contribute to self and social stigma in “stigmatizing illnesses,” such as mental illness. Women felt more stigmatized in Mexico than in the

United States. The authors concluded that stigma related to mental health and other illness such as HIV and TB could be related to the problems related to immigration, including limited access to health care and dependence on other immigrants they rely on for support. However, analysis, based on data from the National Latino and Asian American Study, including Cuban, Puerto Rican, Mexican, and other Latinos, found that support from family, friends, and neighborhood cohesion were associated with positive health outcomes among Latinos (Mulvaney-Day et al. 2006). Viladrich (2007) found that Argentine immigrants living in New York City felt less stigma related to mental health care than other Latino immigrants perhaps because of cultural norms that valued mental health care in their communities in Argentina and in the U.S. The differences between Argentines and Mexicans could also be related to factors such as immigration status, level of education, acculturation, cultural difference between their country of origin and the US, and types of employment available.

Health care access among Hispanics in the U.S. has been studied in large part through the lens of biomedical models. However, as indicated in the following section, it is important to acknowledge that Hispanics also seek and follow alternative medicine approaches.

Ethnomedicine and Traditional Healing

Ethnomedicine and traditional healing are important sources of alternative and supplemental health care for diverse Hispanic populations that often function through informal social networks that are more available to immigrants (Viladrich 2007). Alternative medical treatment has been documented mostly in Mexicans, but evidence has emerged that this approach is also followed by Hispanic immigrants arriving from other Latin American and Caribbean countries (Murguía et al. 2003). In general, Hispanic immigrant communities have limited access to education and adequate employment upon arrival (Murguía et al. 2003, Viladrich 2007). These factors together with deeply rooted cultural beliefs about the origin of health and disease within the context of limited access to health insurance may be associated with more prevalent use of traditional healing, including herbal treatments and spiritual rituals, as alternative means to access care (Reiff et al 2003). Hispanics often combine traditional and biomedical medicine (Murguía et al. 2003). Understanding these “world views” of health and illness is important for biomedically oriented health providers in order to deliver culturally appropriate care. In some cases, Hispanics consult with traditional healers before interacting with Western biomedicine (Reiff et al. 2003). Dialogue about these alternative forms of medicine can improve the relationship between the Hispanic patient and the health care provider (Murguía et al. 2003).

Traditional healing is sometimes associated to spiritual practices in religions such as Santería, mostly practiced by Hispanics from the Caribbean (Murguía et al. 2003, Reiff et al. 2003). Reiff et al. (2003) studied the role of traditional healers (*curanderos*) in women's health in a Dominican population in New York City. In this qualitative study *Curanderos* worked with a sample of women chosen to participate because they had prior diagnoses of uterine fibroids, hot flashes, endometriosis, or menorrhagia. Traditional healers used “intuition,” “sensing,” “feeling the person's vibration,” and others methods for diagnosis and interpreted illness somewhat differently than Western medicine. The treatments recommended included herbal teas, herbal baths, counseling, massage, rituals, and prayer—which were used to purify the body and remove illness in some cases. The immigration experience is accompanied by socio-economic and cultural factors; the complex U.S. mainstream health care system may increase anxiety accentuated by language differences, differences in concepts of illness and healing, and by perceived discrimination. Thus, traditional medicine represents an attractive alternative because healers are more proximal to the socio-cultural experiences of their clients (Reiff et al. 2003). For these reasons, it is

important that future research studies examine the use of traditional healers and remedies among Hispanic migrant populations.

Studies have shown that traditional healing is not only important for addressing physical ailments but also for dealing with mental health problems. Cabassa and Zayas (2007) found in a predominantly Mexican sample from New York City that seeking help for depression depended on their views of depression, attitudes towards doctors' interpersonal skills, and social norms related to seeking professional care. Participants preferred counseling to medications for depression, and had positive attitudes towards using faith to treat and heal from depression. Illness-associated stigma may be influenced by gender differences and openness to alternative medicine. Argentine women were more prone than men to visit urban shamans in the US and Argentina (Viladrich 2007). They felt positively about biomedical mental health service, but they also sought urban shamans for health and social problems, including mental stress, marital problems, stomachache, anxiety, karma, or misfortune.

Methodological Limitations and Recommendations for Future Research

The study of health care access barriers among Hispanics living in the U.S. requires the participation in research studies of very hard-to-reach populations, including undocumented immigrants. This poses serious methodological challenges related to sampling, agreement to participate, and ability to conduct longitudinal studies in highly isolated and often highly mobile populations. These issues are addressed in this section using selected examples from the literature reviewed.

Undocumented immigrants represent a "hidden" population that is difficult to sample. Because of stigma and fear of deportation they are also reluctant to disclose their immigration status to researchers. Immigration status ascertainment is another major challenge specific to health care access research in immigrant populations (Ortega et al. 2007). Much of the limited work that has attempted to approximate a representative sample of these communities has been conducted through phone interviews rather than through face-to-face survey instruments (Berk et al. 2000, Ortega et al. 2007) introducing serious participant biases (Ortega et al. 2007). Even though sampling has sometimes been conducted in venues such as religious organizations and health service NGOs—where there may be more access to marginalized communities and there may be a greater sense of safety (Frates et al. 2003)—we are still far from understanding who is being represented in studies seeking to understand health care access among undocumented Hispanics. Overall, studies have focused primarily on Mexican immigrants, including transient immigrants, leaving a gap in research about other immigrants, especially those coming from other parts of Latin America and the Caribbean (Wallace et al. 2009, Ortega et al. 2007). Future studies need to catch up with the current countries' demographic profile and identify health care access barriers and solutions for the highly heterogeneous Hispanic diasporas that originate from more than 20 different countries (Brown 2008, Pérez-Escamilla 2010, Riffe et al. 2008, Wallace et al. 2009, Weinick et al. 2004).

The study of the health of Latino immigrants, especially undocumented immigrants, is subject to questions regarding cultural meanings and language barriers that may hinder the communication between researchers and the study participants (Flores et al. 2009). Although quantitative surveys can provide useful epidemiological information on health care access (Brown 2008), they cannot go in-depth because they cannot take into account contextual factors the way in-depth qualitative and ethnographic research does. Thus, innovative mixed-methods approaches are needed to make further progress in this area. The work by Flores et al. (2009) illustrates how this approach can help develop more valid research

instruments and study designs to understand health care access barriers among Hispanic families. Qualitative studies are indeed essential for achieving this goal. In fact, some of the most revealing work in terms of disentangling the complex relationships between immigrants and the health care system has been derived from semi-structured and oral history interviews (McGuire and Georges 2003).

Migrant seasonal farm workers represent a population comprised of mostly young men with studies documenting that they live under conditions of extreme poverty and experience health care access barriers (Aranda-Naranjo et al. 2000). Male Hispanic immigrants are indeed at high risk for many adverse physical and mental health outcomes. Arguably, the health of mothers and their children are also affected to a large extent by the well-being of migrant fathers even when separated by long distances. Unfortunately, little research has focused explicitly on this topic.

The possible role that acculturation may play on the risk of infectious diseases among Hispanic immigrants deserves special attention. On one hand acculturation may increase vulnerability among immigrants by fostering the selection of risky behaviors (e.g., drug use, unsafe sex practices). On the other hand it may lead to better outcomes including the ability of partners to communicate better about safe sex practices (CDC 2009a). With regards to non-transmissible chronic diseases, longitudinal research is needed to further understand the apparent paradoxical findings that whereas, on the one hand, lower acculturation is associated with less obesity among Hispanics, on the other hand, acculturation is associated with a higher risk of being diagnosed with T2D (Perez-Escamilla and Putnik 2007) and poorer metabolic control of T2D and other CVD risk factors. These studies need to clearly differentiate between populations of Hispanic immigrants free of chronic diseases or risk factors upon arrival as opposed to those that already arrive with these conditions (Perez-Escamilla 2009). Studies are especially needed to better understand the primary health care needs that immigrants have before becoming sick. In other words, if research continues concentrating on patients that are already ill, the processes and variations in disease prevention may be overlooked (Wallace et al. 2008; Johnson et al. 2008). Undoubtedly this research should also include in-depth qualitative methods (Arcury et al. 2004, Bergland et al. 2006, Weiler and Crist 2009).

Community based participatory research methods may be a way through which researchers can gain greater approximation to immigrant communities—as it has been shown in health care needs assessments (Martinez and Carter-Pokras 2006, Riffe et al. 2008) and intervention studies in the area of oral care (Watson et al. 2001). This is especially the case when community values influence the ability of the individual to respond to questions. When immigrants are recruited to become research staff in studies conducted in their own communities, such as in the “Hispanic Labor Friends” project (Hazard et al. 2009), the level of trust from participants may increase (Galloro 2001), decreasing the possibility of false answers and other immigration status related biases. These approaches also have the potential to decrease stigma and the level of perceived discrimination associated with being an immigrant at least in the context of the research study. This in turn can lead to a greater rapport between the researcher and the study participants (Berk et al. 2000, Shattell et al. 2008).

Whereas some studies (Guendelman et al. 2006) provide support for the “Hispanic Paradox” hypothesis that posits that Mexican-Americans have lower age-adjusted all cause and CVD mortality rates than their non-Hispanic white counterparts, other studies have not. Indeed Hunt et al. (2002) found from the San Antonio Heart Study that after adjusting for key mortality risk factors there was a two-fold excess risk in age-and gender-adjusted overall, and CVD mortality risks among Mexican-Americans with diabetes not treated with insulin

compared with their non-Hispanic white counterparts. Research is needed to further clarify the “Hispanic Paradox” hypothesis and to understand what role, if any, acculturation and immigration status play and how these relationships are mediated or modified by health care access.

Finally, research on access to health should not be divorced from research related to access to education or to employment opportunities in these populations. Low schooling among adults inevitably leads undocumented and documented immigrants into occupations with a higher degree of health hazards and poor health care coverage benefits. Therefore improvements in access to health should be looked at through a highly multidisciplinary and multisectorial lens.

Conclusion

Hispanic immigrants continue to be at very high risk of not having adequate healthcare access (Rutledge and McLaughlin 2008). Because of their relatively healthier status, immigrants with health insurance premiums are currently subsidizing health care for U.S. born immigrants (Ku 2009). Mexico is also contributing towards the health care of Hispanic immigrants living in the U.S. Comprehensive health care and immigration reforms are needed to address this unacceptable health care access disparity (Derose et al. 2007, Perez-Escamilla 2010). These efforts need to address both physical and mental health (Gee et al. 2006, Horton 2006) and include the participation of both the U.S. and Mexico governments and civil societies at large.

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