"MORTAR & PENCIL" CONCORDIA UNIVERSITY WISCONSIN SCHOOL OF PHARMACY STUDENT WRITING CLUB:

The Hispanic Paradox and Implications for Pharmacy Practice

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Abstract

The Hispanic/Latino population is the largest racial and ethnic minority group in the United States, and has an immense impact on the cultural diversity, economy, and public health of the country. As a minority group, Hispanics often face several health disparities, such as low socioeconomic status, limited access to health services, low health literacy, and language barriers. Despite these disparities and the high prevalence of cardiovascular disease within the Hispanic population, studies have indicated that on average Hispanics have lower all-cause and cardiovascular mortality rates than non-Hispanic Whites. This phenomenon has been described as the "Hispanic Paradox." Various theories have been proposed to explain the paradox, including the healthy migrant hypothesis, the salmon bias, acculturation, and the dominant resilience hypothesis. Understanding the different aspects of the Hispanic Paradox can help provide pharmacists with an insight on how to provide patient-centered care and potentially improve outcomes by assessing nutritional quality, psychological and social factors, language, health literacy, socioeconomic status, and the use of complementary and alternative medicine.

The Hispanic population represented 18.9% (62.2 million) of the total population of the United States in 2022.[1] While some people and scholars make a distinction between the terms Hispanic and Latino, these terms are often used synonymously and interchangeably, especially within medical literature.[2] Therefore, for the rest of the article, the term Hispanic will be used. As the largest racial and ethnicity minority group, Hispanics have a large impact on the cultural diversity, economy, and public health of the United States.[1,3] The Hispanic population in the United States includes both foreign-born individuals from Latin American countries, Spain, and several Caribbean countries, and those born in the United States.[1,3] Although Hispanics are a very heterogenous population, which includes a variety of races, ancestries, cultural practices and beliefs, dietary habits, etc., many share a common feature in the use of the Spanish language.[4] Census data from 2019 demonstrated that 71.1% of Hispanics speak a language other than English at home.[5] Spanish is the preferred language among many Hispanics, especially in the home or in familiar environments.[4] Surveys have also shown that among the foreign-born Hispanics who have lived for fewer than three years in the United States, more than 80% report a limited English-speaking ability or no ability to speak English at all.[6] This language discordance (when a provider and patient do not share a common language or have limited proficiency in each other's language) has the potential to lead to negative health outcomes.[7]

Cancer and heart diseases are the leading causes of death in the Hispanic population in the United States.[3,6,8] However, several studies have indicated that Hispanics, a disproportionately low social economic status (SES) group, have lower overall mortality and cardiovascular mortality than non-Hispanic Whites (NHWs), despite the various disparities and the high prevalence of cardiovascular disease within the Hispanic population. This phenomenon is referred to as the Hispanic Paradox.[9] A number of theories been proposed to explain this phenomenon. Many of them suggest that sociodemographic variables, food, habits, cultural influences, and genetic predisposition could have be potential influential factors.[9,10] Like the French Paradox, where researchers discovered that the French population had a lower rate of coronary heart disease (CHD), which helped identify the beneficial role of the Mediterranean diet and wine consumption as protective factors for CHD, a better understanding of the Hispanic Paradox may help identify additional protective factors against cardiovascular disease that can be extended to all Americans.[11]

The purpose of this article is to review the literature on the Hispanic Paradox and outline several recommendations for pharmacists aimed at improving patient care for the Hispanic population in the United States based on challenges, cultural factors, and risk factors associated with the Hispanic Paradox phenomenon.

"The Hispanic Paradox"

Several studies have explained how social determinants of health influence the overall health outcomes of populations.[3,6] Socioeconomic factors including education level, employment status, cultural factors, and environmental factors strongly influence mortality and morbidity within the Hispanic population.[6] Several studies have also reported that financial, structural, and personal barriers influence patients' use of and access to health care services.[6] Low income and lack of health insurance are two of the financial barriers often present in the Hispanic population.[6] Environmental factors, such as poor geographic access to providers and limited transportation,

also influence use of health care services.[6] Moreover, cultural barriers (such as language discordance) and health-related behaviors (such as smoking, alcohol consumption, and sedentarism) negatively impact health outcomes.[6] Based on the potential impact of these health disparities, it would be expected that on average Hispanic patients would have a higher mortality rate compared to NHWs. However, literature suggests that this is not always the case, and that Hispanics actually exhibit lower or equal mortality rates to non-Hispanics, including lower infant mortality rates and lower prevalence for most major diseases.[3] This paradox was first identified based on mortality data in the United States from the National Death Index (NDI).[6,12,13] A cohort study analyzing data from the National Health Interview Survey (NHIS) and NDI from 1986 through 1991 suggested that the mortality rate is lower among Hispanics compared to NHWs, especially among adults 65 years old and older.[6,13] Another cohort study following the NHIS data from 1979 through 1987 concluded that, compared to non-Hispanics, Hispanics had lower mortality rates related to cancer, cardiovascular diseases, and overall. However, it concluded that Hispanics have higher mortality rates from diabetes and homicide compared to non-Hispanics.[6,14] Other studies have shown that Hispanics have lower CHD events and mortality related to CHD compared to NHWs.[9,14] One meta-analysis showed that there was a significant association between Hispanics and lower mortality rates due to cardiovascular events.[15] Additionally, results showed lower all-cause mortality rates among Hispanics, supporting the existence of the Hispanic Paradox.[15] Other studies have suggested that Hispanics generally have longer life expectancies compared to other ethnic groups. For example, according to data from the CDC in 2011, the average life expectancy from birth in the Hispanic population was 81.4 years, compared to 74.8 years in the non-Hispanic Black population and 78.8 in the non-Hispanic White population.[16] A study conducted in California analyzed the influence of clinical, individual, and environmental factors on non-small cell lung cancer survival in the Hispanic population. Results showed that foreign-born Hispanics had improved survival rates compared to NHWs.[17] This study also found that native-born Hispanics had equivalent survival rates to NHWs. These results further supported the health advantage paradox of the Hispanic population.[17] Additional literature suggests that the Hispanic health advantage is even present among Hispanic kidney transplant recipients.[18] Overall, the sum of data support the presence of the Hispanic Paradox phenomenon, highlighting the need to better understand it and potentially use it to further improve patient care and patient outcomes within and beyond the Hispanic population.

Although there are data and articles that support the phenomenon of the Hispanic Paradox, many still refute its existence. For example, a study analyzing Hispanic death and life expectancy estimates in the United States between 1990 and 2000 concluded that there is no Hispanic Paradox. Instead, the authors believed that the phenomenon could possibly be explained by inconsistencies in reporting of Hispanic deaths.[19] Even though some of the supporting literature about the paradox provides compelling results that seem to validate its existence, it is difficult to locate research with complete death records, which would provide a more definitive conclusion.[20]

The Hispanic Paradox Theories

Possible explanations for this paradox may relate to the overall health of individuals immigrating to the United States, suggesting that healthy individuals are more likely to immigrate to the United States than those who are less healthy. Some data suggest that foreign-born Hispanics have better health than those born in the United States, and those who recently immigrated are healthier compared to those residing in the United States for a longer period of time.[9] Other theories speculate that many Hispanics born outside the United States tend to retire in their native country. In turn, mortality rates are not followed for these individuals and may lead to falsely low statistics.[6,9] This potential bias, also known as the salmon bias hypothesis, suggests that dying Hispanic individuals return to their native country to die and are therefore not reflected in the United States' mortality statistics, but there is little evidence of this.[6,9]

Another hypothesis explains how acculturation affects the health outcomes of the Hispanic population. Acculturation refers to the process by which individuals or groups from different cultures come into contact and exchange ideas, customs, beliefs, and practices leading to changes in one or both cultures.[6,9] This acculturation hypothesis suggests that cultural orientation can represent a protective factor by promoting protective behaviors, and once cultural orientation is affected by the mainstream "American" culture, some of these protective factors can disappear.[6] This theory proposes that immigrants who continue similar lifestyles to their native culture are more likely to have better health outcomes.[9] Additionally, it explains that native Hispanics who are more acculturated in terms of nutrition and behavioral risks tend to lose this advantage.[6,9] Although nutritional changes can both positively and negatively impact Hispanic health outcomes, studies have concluded that changes due to acculturation are more negative than positive.[6] Positive dietary changes often seen in the Hispanic population due to acculturation include a decreased use of cream and sausage, and an increased use of milk and salads.[6] Negative dietary changes include a decrease in consumption of natural, homemade juices and vegetable soups, and increase in consumption of saturated fats such as butter or mayonnaise, or carbohydrates such as cookies.[6] Many traditional Hispanic diets may contain less saturated fat and lower caloric intake, in addition to higher fiber and protein intake compared with non-Hispanics diets. The consumption of legumes such as beans is often widespread in many Hispanics cultures, providing valuable nutrition. Fruit intake is also generally very widespread in the Hispanic population.[9] On the other hand, nutritional intake in the non-Hispanic White population often includes fast foods with saturated fats and sugary drinks.[9] Additional risk factors, such as smoking or alcohol consumption, are also less present in the Hispanic population compared to the NHWs. Research conducted on immigrants from Mexico and Central American countries reported that acculturated women have higher smoking rates compared to less acculturated women.[6] Furthermore, some studies have shown that

acculturation is associated with increased drinking behavior and decreased abstention among Hispanic women.[6] The influence of acculturation in smoking and alcohol consumption is less clear in Hispanic men.[6]

A fourth theory that could help explain the Hispanic Paradox is the dominant resilience hypothesis, which presents the idea that cultural factors positively impact health outcomes.[21] It proposes that cultural values such as social integration, familismo (familism, or supportive family relationship), respeto (respect), simpatía (kindness, or understanding and care for someone else's suffering), and communal coping (the process by which two or more individuals come together to respond to adversity) serve as health-promoting mechanisms.[22–24] Social integration, for example, is thought to help with stress and provide support though the disease course.[21] The dominant resilience hypothesis also supports the idea that the presence of nuclear families is a favorable factor influencing emotional and physical well-being, resulting in lower mortality. In summary, possible explanations to account for the Hispanic Paradox include the healthy migrant hypothesis, the salmon bias, acculturation, and the dominant resilience hypothesis.

Overall, despite some skepticism, several confounding variables, and the lack of a clear explanation for the Hispanic Paradox, it does seem likely, according to the Center for Disease Control and Prevention, that there is an association between the Hispanic population and lower rates of cardiovascular disease.[8] This is primarily evidenced by lower mortality rates due to cardiovascular disease in the Hispanic population, especially among foreign-born, newly arrived, and less acculturated Hispanics, compared to the non-Hispanic White population.[8] Identifying additional protective factors leading to these results in the Hispanic population could help develop additional recommendations for prevention and treatment of CVD disease, which would be relevant not only for Hispanic patients but non-Hispanics as well. Additional studies can further explore factors mediating the protective effects within Hispanics and how to extend these effects to all Americans.

Pharmacist Role

The factors that contribute to Hispanic health and disparities are complex and require additional research, comprehensive strategies, and an interdisciplinary approach. However, pharmacists are in a unique position to guide Hispanic patients in the safe and effective administration of their medications. In order to promote the patient's best therapeutic outcome, the delivery of pharmaceutical care relies significantly on communication between the pharmacist and the patient. As mentioned, a significant portion of the Hispanic population living in the United States has limited English proficiency and often prefers to use their native language of Spanish. The appropriate use of medications by Spanish-speaking patients will therefore depend greatly on the pharmacists' ability to communicate effectively with these patients.[25] According to researchers, Spanish-speaking patients may have difficulty learning how to take their medications. A study found that 47% of Spanish-speaking patients stated that the side effects of their medications were not explained to them, in contrast to only 14% of non-Spanish-speaking patients.[26] Additionally, it has been shown that Hispanics who speak only Spanish are less likely to access a regular source of care than Hispanics who speak English.[25] Even though pharmacists are the most accessible of health care providers, the vast majority of pharmacists in the United States lack adequate proficiency in Spanish to effectively and safely communicate with Spanish-speaking patients.[25,27] A multidisciplinary and interprofessional approach between educators, pharmacies, heath centers, and the community is needed in order to educate and train more pharmacists to provide language-concordant care to Spanish-speaking patients. Pharmacists should make a habit of asking about patients' language preferences and make concerted efforts to accommodate these preferences. Consequently, there is a need to create and use additional resources, such as signage and posters in Spanish, picture diagrams, translated monographs and patient handouts, patient education videos in Spanish, and/or to offer interpretation services to facilitate communication with Spanish-speaking patients. However, focusing on language alone is insufficient, especially if cultural factors are not considered.

It is also important to practice cultural sensitivity in order to provide the best patient care. Pharmacists should not assume that all Hispanics share the same health beliefs, as many do not. However, based on the Hispanic Paradox explanatory theories and possible protective factors, pharmacists should consider assessing a patient's nutrition, psychological and social factors, language and health literacy, socioeconomic status, and use of complementary and alternative medicine (CAM) as part of patient-centered care within the framework of the Pharmacist Patient Care Process. For example, pharmacists can specifically ask about the patient's CAM use, reinforce the importance of a healthy diet, and counsel on the consumption of culturally relevant foods and products that will promote better health. Pharmacists should also be mindful of common Hispanic cultural values such as familismo, respeto, and simpatía, which are not dependent on use of the Spanish language.[28] There is also a need to increase the number of Hispanic pharmacy personnel. Beyond the importance of language concordance, there is additional value in understanding and sharing a patient's culture in order to build strong relationships based on empathy and trust.[29] Pharmacists can also promote/use programs such as church- or school-based screenings or peer-educator programs that avoid the erosion of Hispanics' health status due to diabetes, poor mental health, asthma, or high blood pressure, especially when Hispanics become more acculturated.[30] Additional recommendations for pharmacists are outlined in Table 1.

Conclusion

The Hispanic Paradox is the phenomenon that Hispanics, despite having a higher prevalence of cardiovascular risk factors and greater socioeconomic disadvantage (including lower educational level, employment status, wealth, and environmental factors), have lower or equal mortality rates compared to NHWs. Several theories have aimed to explain this phenomenon and how social and cultural components play a major role in the overall mortality rates of Hispanics living in the United States. Even though there is some conflicting evidence regarding the paradox, it can potentially serve as a base for health care recommendations in Hispanic patients.

Understanding the different aspects of the Hispanic Paradox can help provide pharmacists with an insight on how to provide patient-centered care and potentially improve outcomes by assessing nutritional quality, psychological and social factors, language, health literacy, socioeconomic status, and the use of complementary and alternative medicine.

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TABLE 1. Pharmacist Recommendations Based on Protective and Risk Factors

Protective/ Risk Factors	Pharmacists Role / Recommendations
Nutrition Quality	• Personalized assessment of nutritional quality • Assess patient diet and cultural influence in their diet • Reinforce importance of healthy diet/weight and counsel on consumption of culturally relevant foods that will promote better health[31,32]
Psychological and Social Factors, Social Integration	• Include family members in treatment discussions with consent of the patient[33] • Support culturally appropriate community-based interventions (e.g. Community-based screenings with pharmacists, church based interventions, or school-based programs)[34,35,36] • Implement peer-educator or community health worker programs (e.g. Project Dulce)[37,38] • Use LEARN (Listen, Explain, Acknowledge, Recommend, Negotiate) model to facilitate cross-cultural interviewing and bridge cultural gaps[39] • Increase awareness of family and/or traditional cultural values (e.g. simpatía (kindness), respeto (respect), familismo (familism), and communal coping concepts)
Language, Health Literacy	• Encourage and facilitate increased Spanish-communication skills • Hire bilingual personnel to increase language concordance • Provide access to translation and interpreter services • Appropriately use interpretation services • Use the "teach back" method to ensure patient understanding[28] • Allow extra time for patients with limited English proficiency (LEP)[28] • Post bilingual or Spanish-language signage[28] • Provide or enhance culturally sensitive training for staff[28] • Ask patient's language preference and if Spanish, provide Spanish-language medical handouts and patient forms
Socioeconomic Status	• Assess barriers to care (income, transportation, education) • Use available resources to overcome identified barriers (e.g. patient assistance programs, manufacturers' coupons, free clinics, medication delivery options etc.)
Complementary and alternative medicine (CAM)	• Ask about use of CAM including herbals, and know how it may facilitate or impact treatment[40] • Safely accommodate cultural beliefs and practices in patient medication management • If effectiveness of traditional medicine cannot be assessed, assess safety, and involve the patient in decision making toward their treatment • Familiarize oneself with common folk illnesses and healing practices within the Hispanic population (e.g. empacho, mal de ojo, susto etc)[41]

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