A Conceptual Framework for Hispanic Oral Health Care

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Abstract

The need to study the health and health care determinants of US Hispanics is mandated by their rapid population growth. Nonetheless, it is challenging to study such a diverse population that incorporates many similarities and differences in values and experiences. This paper aims to highlight the factors that should be considered in Hispanic oral health research in the United States, and presents, in a theoretical framework, the relationships between these factors. The proposed ecological framework is supported by an extensive literature review, with an emphasis on the factors that are reported to differ among ethnic groups. It has a foundation in social science and is based on existing models from different fields of knowledge. To be comprehensive, the framework simultaneously addresses individual and environmental constructs. Within these, antecedent factors shape the intention to seek oral health care, while empowerment factors play a mediating role between intention and actual receipt of care. Individual antecedent factors incorporate risk markers, need, and predisposing factors. Environmental antecedent factors are represented by social constructs that allude to the population's health culture. Empowerment factors explain the level of control that a person perceives or the environment provides in receiving care. A thorough consideration of the factors that drive Hispanics' oral health care usage will aid US researchers and practitioners in improving this population's health and access to care.

Key Words: Hispanic-Americans, dental health services, theoretical models

Introduction

People of Spanish descent, Hispanics, or Latinos are ethnic labels commonly used to refer to the fastest growing and largest minority population in the United States (1). These terms commonly refer to immigrants from countries of Latin America where Spanish or Portuguese are spoken or to people who can trace their ancestry to one of these countries, Spain, or Portugal (2,3). Currently, there is no gold standard for ethnicity other than self-report; ambiguity remains as to whether some populations, such as Spaniards or Portuguese, are included in this group, and controversy exists about exactly which label properly defines group membership (4,5). The term "Latino" is Spanish for "Latin," which, by definition, would include Italians and French among others. Common usage of this term in the United States refers to people from Latin America, excluding people born outside the western hemisphere (4,5). On the other hand, the term Hispanic, which is derived from the word "Hispania" (i.e., Iberian Peninsula), by definition, would include people born in Spain or Portugal, and any person of such origin. Throughout the text, we will use the generic term Hispanic but will consider it to be interchangeable with the terms Latino or Spanish.

This population in the United States grew 265 percent between 1950 and 1980 (6); in just 1 year, from 2003 to 2004, the overall Hispanic growth rate was 3.6 percent (7). Moreover, while in 1980 Hispanics represented 6.4 percent of the total US population, in 2005 they accounted for 14.4 percent of the US population (8). Projections indicate that by the year 2040, there will be 87.5 million Hispanics, about 22.3 percent of the US population (9).

Hispanics are a young population, yet compared with their non-Hispanic counterparts, they are less likely to finish high school and are more likely to be poor, unemployed, and uninsured (7). Similarly, the average health literacy score for US Hispanics in the National Assessment of Adult Literacy Survey was the lowest among all racial/ethnic groups compared; for approximately 41 percent, literacy levels were classified as "below basic," indicating an ability to perform no more than the most simple and concrete literacy skills (10). These factors undoubtedly relate to health and health care and need to be considered when exploring ethnic disparities.

A growing interest in Hispanic health has documented disparities in health conditions, health insurance, access to care, and use of health care services (11). Hispanics are less likely to seek and receive health care. They are more likely to forego

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care when needed and less likely to report a usual source of care (12-14). Barriers to utilizing indicated health services may include cultural and linguistic factors, and unfamiliarity, fear, or mistrust of the health care system (15).

The recent and projected changes in US demographics suggest that people of Hispanic origin will increasingly influence characteristics of patient pools, use and frequency of health care, and types of services rendered with respect to oral health care (16). People of Hispanic origin have the lowest dental care utilization of any ethnic population (as low as 13.1 percent) (17). Compared with non-Hispanic Whites, at all levels of income and education, Hispanics are less likely to have a dental visit in the past year (18). Disparities in oral health care utilization exist for all types of treatment services and seem to be increasing (19). Hispanics report fewer diagnostic, preventive, restorative, and prosthetic visits and more oral surgery visits than Whites (20).

This paper aims to point out the social and cultural factors that contribute to Hispanics' health-related beliefs, practices, and decisions. Based on a narrative review of the literature, we propose a conceptual framework to a) guide Hispanic research design and analysis by suggesting potential relationships among variables and b) aid in program planning, development, and evaluation.

Hispanics in the United States

Hispanics reside throughout the United States and its territories. The Hispanic population as a percent of the total population is greater in the west, whereas the Midwest has the lowest percentage (6). Geographic selection contributes to an ethnic identity and cultural coherence that may reduce negative health behaviors and socioeconomic and psychosocial stress (21). On the other hand, it may also evolve into "subculturalization" (22) and become a barrier with respect to health services, prevention, and education that ultimately contributes to health disparities.

Culture and Values. Hispanics are as much alike as they are different. Although individual and subgroup differences exist, it is a shared culture that leads Hispanics to be identified as part of the same ethnic group with values and attitudes that differ from non-Hispanic populations (6,23). Individual differences may be observed in terms of language proficiency and health literacy, among others. Subgroup differences, expressed though national origin and ancestry, relate to factors such as migration history and status. The interaction of these factors with their new environment within the United States influences belief systems and social structures, which contribute to varying health behaviors.

Hispanic similarities in cultural values – particularly familism, allocentrism, and simpatía – affect the process and outcome of Hispanic research and should be considered when formulating a research question, planning data collection methods, and analyzing study results (6). Familism or familialism, the identification and attachment of nuclear and extended families, is an important factor in immigration and settlement because relatives become not only behavioral and attitudinal referents, but also providers of material and emotional support (6,22,24). Allocentrism or collectivism provides a similar support structure and refers to social behaviors that resemble group needs, objectives, and points of view; allocentric people value interdependence and more readily internalize group norms (6,25,26). "Simpatía" emphasizes behaviors that promote empathy, respect, and avoidance of conflict (6,25). This social script becomes important when study participants provide responses they believe are expected of them or when they refrain from reporting problems to avoid inconveniencing others (6,25).

Proposed Framework

The purpose of theoretical frameworks is to simplify complex processes and build hypothetical relationships between variables that facilitate reasoning. We base the proposed framework on a review of the published literature; however, it would be impractical and beyond the scope of the paper to provide a systematic review for each construct. Instead, to support the components of the proposed framework, we provide a narrative review, with examples from the available literature. The first step was to identify the factors related to the health care of Hispanics through PubMed searches using combinations of the terms "health care utilization," "dental care," "epidemiology," and "Hispanic." These factors were then articulated into a gross framework based on existing models from different disciplines. Next, each construct of the framework was included as a term in an independent search. As in the first step, abstracts were appraised and select articles that clearly reported ethnic differences were retrieved; when relevant, sources cited in these articles were also reviewed, and improvements were made to the framework accordingly.

In developing this framework, we considered that interpersonal and community theories were particularly suitable for Hispanics. Such theories include constructs of social support and social networks that touch on Hispanic culture and values. Additionally, an emphasis is placed on the enabling factors, which largely include variables that make the Hispanic community differ from other communities.

The proposed conceptual framework (Figure 1) considers the classic model of health service utilization by Andersen and Newman (27), but also takes into account the work of several other health behavior and social scientists. Ajzen, in the "Theory of Planned Behavior," recognizes the importance of behavioral intention and introduces the concept of perceived behavioral control (28) (instead, we will use the term "empowerment" to avoid confusion with the epidemiologic notion of analytic "control"). Behavioral intention is defined as the perceived likelihood of performing the behavior,

and perceived behavioral control is an overall measure of the individual's perception of their ability to perform the behavior (28). Similarly, the Triandis model considers behavioral intention as a predictor of behavior, affected by personal and social components such as the appropriateness of performing the behavior, and adds habit and "facilitating conditions" as predictors of behavior (29). We have incorporated the concept of behavioral intention through the "intention to seek care" domain, which is determined by individual and environmental antecedent factors. Intention then becomes a cornerstone in the process of seeking and receiving care.

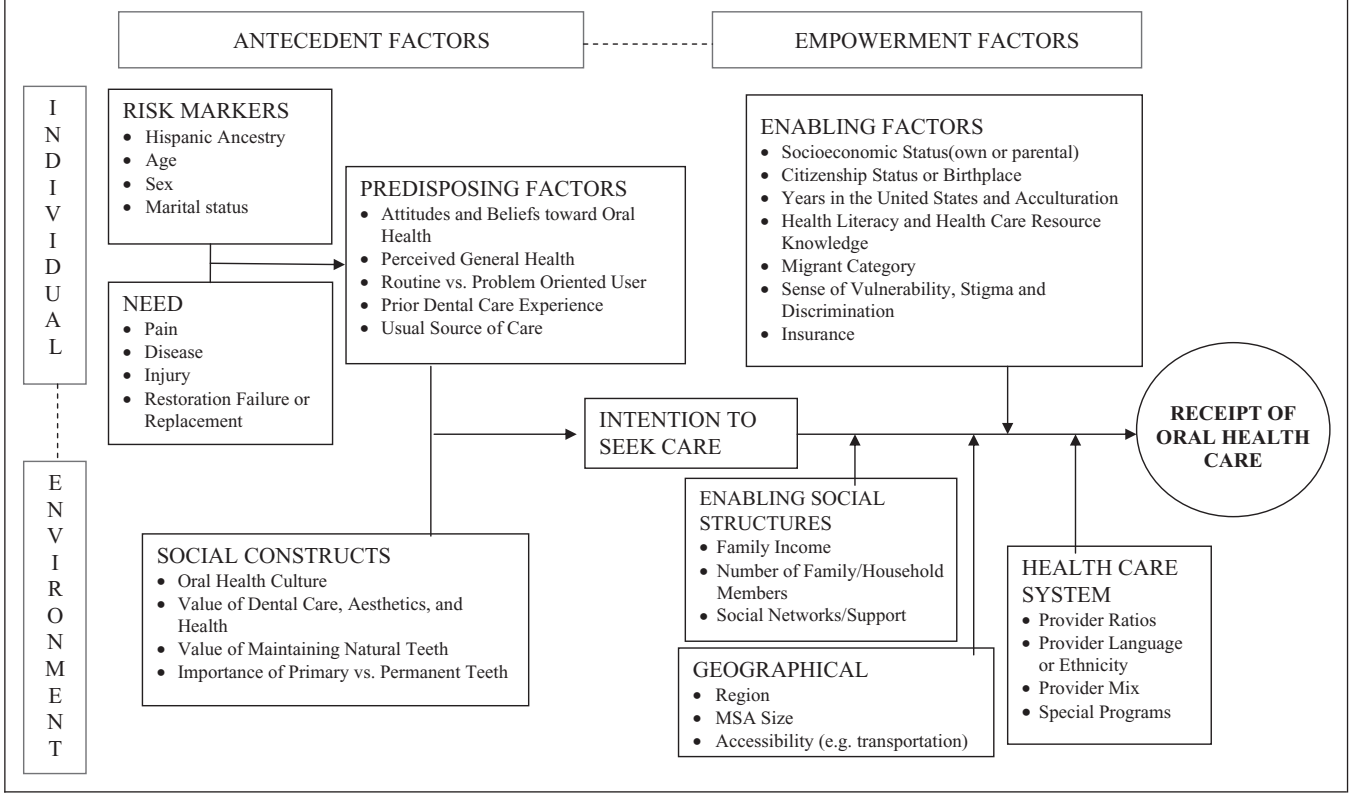
The "Social Cognitive Theory," through its reciprocal determinism postulate, emphasizes the interactions between individuals, their behavior, and the environment (28). We argue in support of this theory on the dynamic interaction between individual and environment; however, we believe that behavior is integral and inseparable from the individual, and therefore we have not used it as a separate construct.

The PRECEDE-PROCEED Planning Model classifies individual characteristics into one of these three groups: predisposing, enabling, and reinforcing factors. Similarly, Andersen, in his behavioral model, groups individual characteristics into predisposing, enabling, and illness level or need variables (27,30). Although these concepts have been incorporated into our framework, we consider demographic characteristics not as predisposing or "biological imperatives that suggest the likelihood that people will need health services"(30), but as risk markers for both need (clinical and perceived) and predisposing factors (attitudes, beliefs, prior experiences, and behaviors). Additionally, Andersen and Newman include family and community characteristics as integral to the individual within the enabling component (27); we have preferred to keep individual factors distinct from family and societal characteristics and have kept geographic and health care system variables proximal to the receipt of care.

We propose a framework that categorizes constructs as either part of the individual or their social environment. In Figure 1, distal influences are included within the antecedent factors. Individual antecedent factors are either risk markers, predisposing factors, or need factors. Environmental antecedent factors pertain to the social constructs or the health culture of particular Hispanic subpopulations. Empowerment factors, more proximal influences, explain the level of control that either the person perceives or the environment provides for the receipt of care and the interrelationship between these two levels. Empowerment factors facilitate or interrupt the path from intention to seek care and actual receipt of dental care.

In the following paragraphs, we will define each construct and expand on the characteristics that

Figure 1
Proposed conceptual framework for the receipt of oral health care among Hispanics in the United States



may influence Hispanics differently than the general population by citing pertinent literature.

Risk markers, defined as determinants of a behavior but not direct causative agents, include variables such as age, sex, marital status, and Hispanic ancestry.

Country of origin or ancestry not only defines group membership among Hispanics, it may act as a proxy for social and demographic characteristics. Despite the cultural patterns previously described, research shows that Hispanics are not a homogeneous population in regard to their health and health care (7,31,32).

Need factors, both clinical and perceived, point to the individual's health status and the severity of disease. The prevalence of dental caries is higher for Hispanic children, with one study revealing up to a 20 percent difference between Hispanic children and their non-Hispanic counterparts (33). Researchers also report disparities in disease severity, percentage of decay that has been treated, and loss of permanent teeth among children and adolescents (33).

In one report, Hispanics had a higher prevalence of gingivitis among American adults; among Hispanics, Puerto Ricans had the highest levels of periodontal disease (34). Hispanics are also reported to have a higher prevalence of calculus, gingivitis, attachment loss, and periodontal pockets than White and Black non-Hispanics (35). Gingivitis measured by gingival bleeding was more evident among Mexican-Americans when compared with other ethnic groups; furthermore, Hispanics were more likely to report toothaches than non-Hispanic Whites (17). The prevalence of tooth loss was reported to be higher among Cuban and Puerto Rican adults than among Mexican-Americans, and total tooth loss was highest for Cuban-Americans compared with Mexican-Americans and Puerto Ricans (34). Finally, Hispanics report high levels of perceived need and high levels of unmet needs (35).

Predisposing factors incline an individual toward a behavior and are related to the way health care is approached, personal beliefs and attitudes toward health, perceptions of one's health, and prior experiences with the dental or health care system.

Hispanic-Americans are more likely to lack a usual source of medical care and less likely to use preventive services when compared with other non-Hispanic groups (12,13). Future studies on Hispanics could clarify if dental care-seeking behaviors, dental attitudes, and dental health beliefs impact oral health outcomes and dental care use differently among Hispanics.

Social constructs are analogous to predisposing factors, but at a community level. In other words, these are culturally based factors such as the value society places on teeth, behavioral norms that affect oral health, or generalized trust in providers (36,37). These shared values and norms or "social influence" contribute to behavioral modification, without a deliberate attempt to do so (38). Culturally based differences in relation to oral health and health care outcomes between Hispanics and non-Hispanics and among Hispanic subgroups is clearly an area with great research potential.

Individual enabling factors explain the level of control that the person has over their own oral health. These factors include variables such as socioeconomic status, insurance, and – particularly pertinent to Hispanic-related research – health literacy and health care resource knowledge, level of acculturation and assimilation (e.g., language proficiency, years lived in the host country), and sense of vulnerability, stigma, and discrimination. Place of birth could be used to distinguish between foreign- and US-born Hispanics; related, but not the same, is citizenship status, which provides knowledge on constitutional rights. For the foreign-born Hispanics, migrant category determines if the person is a refugee, asylum seeker, foreign student, migrant worker, permanent migrant, or more broadly, a documented (regular) migrant or undocumented (irregular) migrant, or a forced or voluntary migrant (39).

Expanding upon some of these variables, insurance, for example, has been widely studied as a determining factor for health care. Findings suggest that Hispanics are considerably less likely to have health insurance than are White Americans (11). Among Hispanics, foreign-born Hispanics are more likely to be uninsured, with a distribution varying from 17 percent of Puerto Ricans to 35.4 percent of Mexican-Americans (40). Foreign-born Hispanics also report fewer health care visits and are less likely to receive preventive care (41). Studies indicate that acculturation is a predictor of better oral health, increased utilization of oral health services, and more positive self-rated oral health (42); for example, Hispanics who speak primarily English at home (a measure of acculturation) were more likely to use dental health services and establish a "dental home" than those who speak mainly Spanish (43).

Enabling social structures include variables related to social networks expressed as social support and engagement and are considered to be of certain interest for research among Hispanic communities. Social support is provided through a) emotional support (e.g., love and caring), b) instrumental support (e.g., assistance with tangible needs), c) appraisal (e.g., feedback and aid in decision making), and d) informational support (e.g., guidance) (38). Social engagement refers to participation in social activities, which define and reinforce social roles and provide individuals with a sense of meaning and attachment to their community (38).

Geographical variables refer to factors that help define accessibility or that characterize a region, such as modes of transportation, distance from health care facilities, urban and rural living, or neighborhood makeup.

Research is increasingly focused on community characteristics and suggesting relationships with access and use of health care. Some of these factors include distance, in which travel time, cost, and effort may become barriers to care (44). Like distance, other variables such as mobility, transportation, and area deprivation may be related to oral health care outcomes.

Health care system variables intend to capture the supply, availability, and quality of health care. These can be measured through the provision of linguistic and culturally appropriate care (45), racial or ethnic patient–provider concordance (46,47), or means within the health care system to facilitate accessing insurance structures such as Medicare, Medicaid, or programs such as the State Children's Health Insurance Program. Others consider workforce sufficiency and distribution (48) or incorporate the concept of a "dental home"(43).

Conclusion

Cultural competence in health care has been advocated as a means to aid in the reduction of health disparities. Yet not all oral health professionals have the background knowledge necessary to provide culturally appropriate care, implement or evaluate culturally based health programs, or conduct cross-cultural research. In this regard, care for Hispanics can be challenging because of subgroup differences that, as suggested by the framework presented in this paper, need to be taken into account when possible. Nonetheless, it is their shared cultural values and attitudes that a) lead to the identification of its subgroup members as part of the same ethnic group and b) differentiate Hispanics from other ethnic groups within the United States. Therefore, it is important to understand the factors that influence Hispanic-Americans' utilization of dental health services in order to better meet the needs of this growing population and improve their oral health status.

We acknowledge that some of the proposed constructs in our framework would be particularly relevant for other ethnic groups, yet we also note that other factors may not be pertinent. The proposed framework intends to show how specific variables relate to Hispanics in particular. Disentangling the effects of these variables on Hispanics' health behaviors, health care, and health status is not straightforward. The task, however, could be aided by a theoretical framework that clarifies how all these factors articulate and interact.

Researchers who have studied the dental health care utilization of Hispanics have looked at factors such as insurance, need, and demographic characteristics, but have failed to incorporate important factors such as concordance between patient and provider, sense of vulnerability, and cultural values. In excluding these variables, researchers have missed the opportunity to examine the effects of social relations, migration, and dental health literacy, for example. Through this integrated approach, a more critical and systematic way of generating hypotheses will move the field forward more than the current mechanistic and atheoretical method of variable selection. Similarly, policymakers would benefit from a more detailed perspective when examining issues of agency responsibility and accountability, and a more coherent approach to guide their actions towards achieving "healthy" policies needed to curtail inequalities and promote and protect oral health. Our call is to test the validity and usefulness of the framework through systematic reviews, in applied research, and in program development.

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