

Identification of barriers and beliefs influencing engagement by adult and teen Mexican-Americans in oral health behaviors

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Objective: To identify barriers and beliefs influencing oral health and dental care-seeking among Mexican-Americans. **Research Design:** Interviews and Likert-scale survey questions were utilized to explore urgent and preventive dental care-seeking, oral hygiene habits and lifestyle practices. Thirty-three interviews were conducted with 16 adults (ages 33–52), and 17 adolescents (ages 14–19). **Results:** Teens identified the same main barriers to accessing dental care as adults: high cost, financial limitations and lack of insurance. Most Mexican-Americans agreed with the belief that everyone will need urgent dental treatment and the majority believed that going to a dentist in private practice instead of the Emergency Room was important. Although adults recognized the importance of preventive dental care, half reported being unlikely to seek such care while half of teens reported that they were likely to do so. Adults reported relying equally on themselves and on peers to make dental care decisions, while teens mostly depended on others to make decisions about urgent and preventive care. Virtually all respondents believed regular brushing to be important and many flossing too. A major barrier to flossing was being unsure of the proper technique. Another barrier to better oral health was not having seen messages encouraging changes in lifestyle. **Conclusions:** This study found that Mexican-American teens and adults may experience oral health similarly. Teens do not have more positive oral health beliefs and encounter mostly the same barriers to care as adults.

Key words: Mexican-American, oral health, health services needs and demand, dental care, oral hygiene, toothbrushing, adolescent, USA

Introduction

Compared to the general population, Latinos have less access to health care, lower levels of education, are more likely to live in poverty, face cultural and linguistic barriers and are often unfamiliar, fearful, or mistrusting of the health care system (Balluz *et al.*, 2004; Niederman *et al.*, 2008). These challenges place them at higher risk for oral problems. Among Latino children and adolescents, Mexican-Americans reportedly have the poorest dental health, with more untreated caries and the lowest use of preventive dental care, mainly due to socio-economic factors (Dye *et al.*, 2012; Scott and Simile, 2005). Moreover, they have the lowest dental utilization rates of all Latino groups, even after accounting for differences in age, income, education level, gender and dental insurance (Wall and Brown, 2004). Adult Mexican-Americans also suffer from poor oral health. They have high rates of periodontal disease, are unlikely to receive dental care and have a high percentage of unmet dental needs (Scott and Simile, 2005; Eke *et al.*, 2012).

Given the size of the Mexican-American population, its rapid expansion and documented disparities in oral health care utilization and outcomes, understanding factors affecting the observed disparities is of public health significance. Such barriers to oral care likely include economic, socio-cultural, structural and personal factors. However, observed disparities may also point to the existence of beliefs that can place people at higher risk for poor oral health (Broadbent *et al.*, 2006). Yet, most

research on oral health disparities in Latinos uses epidemiological perspectives and focuses on common barriers to care; little is known about oral health beliefs and other interpersonal and cultural factors that may affect their oral health and dental care-seeking behaviors (Butani *et al.*, 2008). Even less is known about Mexican-American adolescents. Understanding barriers and facilitators to oral care among Mexican-American adolescents is vital to gain better understanding of the problems they face. It is also essential for developing programs, interventions and messages to support Mexican-American oral health at an age when there is an opportunity to promote beneficial behaviors to be carried on to adulthood.

The objective of the present research was to explore and compare adolescent and adult Mexican-American engagement in key oral health care behaviors (such as tooth brushing, flossing, and seeking preventive care) and to identify barriers and beliefs that may affect oral health.

Method

Ethical approval was granted by Indiana University (IRB #1207009118). Mexican-American teens or adults living in an urban environment in central Indiana were recruited through advertising at health fairs, churches and religious gatherings, the waiting room in the Mexican Consulate in Indianapolis, and community functions in the fall and winter 2012–2013. Additionally, recruitment was carried out by word of mouth and through partnerships with church and community leaders.

Assent from teens and written informed consent from the parents and adults were obtained. Adults and teenagers were interviewed separately, in English or Spanish, according to their preference by three interviewers: one English-speaking female with public health training, one female dentist and one male dentist, both bilingual and with public health training. Interviews were audio recorded and typically lasted 20-45 minutes. Participants received US\$30 payment in compensation.

A mixed qualitative and quantitative method was used with partly guided interviews. A script with 50 open-ended questions and 13 Likert-scale questions was created in both English and Spanish. Both types of questions explored general beliefs regarding dental care and examined engagement in factors influencing specific areas: 1, urgent dental care-seeking; 2, preventive dental care-seeking; 3 dental self-care behaviors; and, 4, oral care related lifestyle behaviors. Participants were encouraged to expand on their interpretations beyond the script.

Qualitative data from one-on-one interviews were analyzed and coded by the three interviewers using the three primary phases of grounded theory (Strauss and Corbin, 1990; 1994). Analyses were carried out in either English or Spanish, as originally obtained from the participant. During the open coding, responses were grouped into similar clusters, giving an initial set of categories. Coding was undertaken by allocating discrete segments of text to an individual category when the theme was explicitly stated, or when the context and the meaning of text made it sufficiently unequivocal to allow certainty in the classification.

Categories were refined until better grounded themes emerged (axial coding), while crosschecking fit within other categories. Finally, through selective coding, all the items, categories and themes were re-assessed, seeking consistency and coherence among the resulting structure.

Quantitative responses were examined with frequency distributions and reported as "likelihood" or "agreement"; all other percentages reported are frequency counts for themes. For Likert scales the two categories at the end of the scales (e.g. agreed and strongly agreed, or unimportant and very unimportant) were combined.

Results

Interviews were conducted with 17 Mexican-American adolescents aged 14-19 (10 female, 7 male) and 16 adults aged 33-52 (13 female, 3 male). No new themes emerged in the later interviews, suggesting data saturation was reached. Emerging themes have been reported separately.

Regarding the need for urgent dental care, 77% of teens and 88% of adults reported believing that everyone will need urgent dental treatment. This belief is understandable in adults, as 69% had already sought urgent dental care whereas 82% of teens had not. Most thought that going to a dentist in private practice instead of going to the hospital emergency room was important when seeking urgent care (88% teens; 75% adults). However, they sometimes chose the hospital because they could be seen without an appointment, giving them the flexibility to go when work or school schedules allowed. Almost all (94% teens; 88% adults) reported they would rather see a dentist in private practice and get more personal

attention, benefit from specialized knowledge and be seen sooner than at the hospital. In addition, the teens were not sure which they would choose for urgent care primarily because they were not the ones making the decision; 77% of them reported that others (parents, teachers, physicians) influenced this decision. About half the adults (56%) also reported their decision was influenced by others.

When it came to preventive care, interviewees believed it was important to see a private practice dentist (77% teens; 63% adults). Even though adults recognized the importance of preventive care, half reported being unlikely to seek a private dentist to get preventive care. In fact, 81% of adults believed that pain motivates individuals to seek dental care rather than need for preventive care. For 71% of teens the decision to seek preventive care was again influenced by others (primarily parents, but also family members, teachers, physicians). Adults also reported that this decision was influenced by others, mainly encouragement from a spouse.

Regarding urgent dental care, almost half of teens (47%) and more adults (88%) identified high cost as the main barrier to accessing care, followed by financial limitations to afford dental care regardless of cost (35% teens; 44% adults) and lack of insurance (18% teens; 25% adults). Both teens (24%) and adults (25%) perceived preventive dental care as expensive and felt constrained by financial limitations. Another barrier that was mentioned, more so by adults than teens, was the difficulty to get appointments, both for urgent (12% teens; 25% adults) and for preventive care (6% teens; 19% adults). When they telephoned dental clinics, they only got an answering machine in English, or they were told that appointments could only be scheduled on a limited basis, even when facing a dental emergency. They also mentioned that dental offices did not have extended hours: work or school schedules sometimes impeded them from setting up appointments. Another reported obstacle to accessing urgent dental care was difficulty finding an accessible clinic (18% teens; 38% adults). Both teens (12%) and adults (19%) mentioned transport difficulties. Dental anxiety and fear of pain when seeking urgent care was a barrier mentioned by some adults (25%) and teens (12%). Similarly, some teens (12%) and adults (19%) were fearful of preventive care because they did not know what to expect; adults feared the cost since several mentioned that they were often not fully informed of the costs beforehand.

The issue of fear and anxiety related to cost connects with an additional barrier discussed only by adults: their own perceived dental needs being different from the dentist's recommendations, both for urgent (19%) and preventive care (13%). Moreover, due to financial limitations, Mexican-Americans often can only afford to have the tooth causing pain treated. For many participants, this cluster of factors became a barrier to seeking further care because they would rather stop seeing that dentist and avoid confrontation, than having to address this disconnect between their perceptions of need, their financial ability and recommended treatment. Some respondents reported not returning to the dentist for fear of being chastised for not continuing with comprehensive treatment plans.

Beliefs about oral hygiene and oral health related lifestyle behaviors were also identified. Virtually all the sample believed in the importance of regular brushing (all teens; 95% adults), brushing after every meal (94% teens; all adults) and brushing before going to bed (all in both groups). Some teens (29%) admitted that it was hard to brush regularly due to school and work schedules. While sometimes resources posed challenges (“one does not have a tooth brush, toothpaste or even a sink available”), both teens (29%) and adults (19%) felt that “*desidia*” (i.e., apathy, negligence, inertia) affects tooth brushing and about a third of adults felt that poor discipline, especially concerning preventive care, leads to dental problems. Most respondents believed that use of toothpaste when brushing your teeth was important (94% teens; all adults). All adults believed that use of toothpaste containing fluoride was important. However, only 65% of teens shared this belief and 35% of the teens thought that fluoride had disadvantages, although they could not explain what they were.

Regarding flossing, most Mexican-Americans (77% teens; 81% adults) believed it to be important; teens (59%) and adults (63%) reported they were likely to floss at least once daily. However, most teens (77%) and some adults (19%) admitted that it was hard to floss regularly, especially due to “*desidia*”. However, the main reason offered by all for not flossing was that it *caused* their gums to hurt and bleed and that they were unsure of the correct flossing technique (77% teens; 69% adults). The majority (77% teens; 56% adults) admitted that the only time flossing was useful was to remove food lodged between teeth, rendering it as a need-driven behavior rather than a habitual one.

A barrier that may prevent Mexican-Americans from improving oral health is that they have not seen media messages encouraging changes in lifestyle (e.g. smoking cessation, cutting down on snacks) to support oral health (29% teens; 69% adults), although some teens reported receiving such messages at school (24%). This may be because they do not regularly visit a health care provider who could make these suggestions.

Discussion

This study confirms previously identified barriers to dental care among a Mexican-American population. Self-identified barriers were financial (e.g. high cost, lack of insurance), structural (e.g. dental offices do not offer extended hours, work and school schedules limit opportunities to seek care, location of dental offices) and personal (e.g. dental anxiety, perceived needs versus recommendations disconnect, apathy).

Teens identified almost the same barriers as adults, suggesting that both experience oral health similarly. Both believed that everyone will need urgent dental treatment suggesting a fatalism regarding oral health and this need being the norm in their community. It was reported that Mexican-Americans choose the emergency room for urgent treatment because it is cheaper and more convenient, as previously reported commonplace among poor and minority populations (Cohen and Manski, 2006). While it is encouraging that most participants considered it important to seek a private

dentist instead of going to the emergency room, it is worrisome that they perceive urgent care as normal, inevitable and unavoidable.

The adults reported relying on themselves and sometimes others (spouse, friends and extended family) to make oral care decisions, while teens depended, unsurprisingly, almost exclusively on parents and extended family. This agrees with reports of Latino family members incorporating a network of friends and relatives for advice in making health care decisions (Hilton *et al.*, 2007). Relying on social and family networks for advice to influence oral healthcare decisions and access to care may exacerbate previously noted fatalism, especially in families where elders tend toward a more defeatist view of oral health and the inevitability of dental diseases (Butani *et al.*, 2008). Elders may lack current knowledge about oral disease and the importance of prevention and timely treatment. They also may have had negative personal experiences of dental care that make them fearful and shape their advice to family members. The role of networks as they influence oral health care-seeking behaviors must therefore be better understood.

Most respondents believed in the importance of brushing and flossing, reported brushing regularly and believed in the importance of using fluoridated toothpaste. However, some teens questioned the use of fluoride; if they were to choose unfluoridated toothpaste, this would increase their caries risk. Unsurprisingly, time, space and materials were barriers to engagement in brushing and flossing. However, “*desidia*” was also common; the role of apathy, inertia and lack of habituation may warrant attention among Mexican-Americans. An important notion for future research and intervention is that adults and teens regarded brushing as a habitual behavior but flossing was commonly framed as a needs-driven behavior. This may be particularly important when considering that a common barrier to flossing was “*makes my gums bleed*” and that, in fact, bleeding could be framed as a need, not an adverse outcome (i.e. your gums bleed because you are not flossing, you therefore need to floss to avoid bleeding).

Regarding oral health messages and media, most Mexican-Americans reported not encountering lifestyle-related oral health messages with very few reporting ever being told by dentists or other providers about quitting smoking or changing their diet to improve oral health. This suggests areas that are being overlooked in terms of broadcast media and provider-delivered messages to improve oral health among this community.

Limitations of this study include those inherent to qualitative methods such as relying on the ability and willingness of respondents to give accurate and complete answers, especially teen respondents. There may be a social desirability bias, where respondents said what they thought the interviewers wanted to hear. Nevertheless, respondents were reassured of the non-judgmental nature of the study; they also knew they would not receive dental treatment. Although we commenced the study with predetermined areas of interest, semi-structured questions allowed respondents to expand on their answers without limiting to the agenda. There were more female respondents; therefore results may be more favorable in terms of beliefs and oral health behaviors (Osterberg *et al.*, 2001).

Also, socially isolated people are underrepresented. Other limitations include the lack of information on factors that have been reported to affect oral health and access to care, such as income, insurance, oral health knowledge, number of years in the U.S., rural versus urban origin, level of education and level of acculturation (Poutanen *et al.*, 2006; Watson *et al.*, 1999). These limitations may not be crucial, as cultural health beliefs have been reported to be better predictors of using Western health care practices and to better explain utilization of the health care system than socio-demographic and acculturation factors (Borrayo and Jenkins, 2003). Given the small numbers of interviews, the percentages reported for adults and teens should be compared with caution.

In conclusion, Mexican-American teens did not have more positive beliefs and behaviors than the adults. This finding may be influenced by degree of acculturation; if the teens interviewed have been in the U.S. for a short time, behaviors and beliefs would not have had time to be modified and family members' experience of dental disease may still heavily influence their beliefs. Adolescents identified fewer barriers to dental care than parents, perhaps because they are unaware of the difficulties faced by parents when seeking and accessing dental care. Even so, almost half the teens considered high cost of dental care as a main barrier.

Several behaviors were intertwined among the barriers and beliefs we identified. First, there is a dependence on family and peers which may affect engagement in various oral health care behaviors positively or negatively. The second behavior is "desidia" with respondents being apathetic especially with habituation to maladaptive behaviors such as not flossing. Finally, both of these behaviors can interact with an apparent fatalism concerning oral health. Each of these merit attention as future research examines beliefs influencing Mexican-American engagement in care (under frameworks such as the Expanded Health Belief Model, or the Integrative Model of Behavior Prediction), extending into quantitative model development in a larger sample, applying the beliefs identified in this study as the starting point. By further development of a model of factors influencing oral care, future researchers and interventionists may be better able to identify points of leverage, propose interventions and evaluate their success.

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