

Changes in Dental Care Utilization and Barriers among Mexican Americans: *Evidence from NHANES III and 2011-2020*

Chengming Han¹ & Nan Zhou²

¹ Sealy Center on Aging, University of Texas Medical Branch, Galveston, United States

² Department of Sociology, Case Western Reserve University, Cleveland, United States

Correspondence: Chengming Han, Sealy Center on Aging (SCOA), 301 University Blvd. Galveston, TX, USA 77555-0177. Tel: 1-216-785-6177. E-mail: chehan@utmb.edu

Received: January 4, 2025 Accepted: February 5, 2025 Online Published: February 15, 2025

doi:10.5539/gjhs.v17n2p10

URL: <https://doi.org/10.5539/gjhs.v17n2p10>

Abstract

Objective: This study examines trends and factors influencing dental care utilization among Mexican Americans from 1988 to 2020.

Methods: Data from the National Health and Nutrition Examination Survey (NHANES) III and 2011-2020 were analyzed using logistic regression to assess the impact of immigrant status and socioeconomic status on dental visits among Mexican Americans. Slope tests were applied to examine the different patterns across cohorts.

Results: Compared to NHANES III, the 2011-2020 waves showed a decrease in the proportion of irregular dentist visits (from 0.67 to 0.54) and an increase in foreign-born status (0.46 to 0.57) and college education (0.19 to 0.33). The 2011-2020 sample was also older than that of NHANES III. Regression analyses revealed that speaking Spanish was associated with higher odds of irregular dentist visits, while higher education, family income, and health insurance were associated with lower odds of irregular dentist visits. The protective effect of foreign-born status on dental care utilization has increased over time, while the protective effects of college education and higher family income have diminished.

Policy Implications: Expanding language services and increasing health insurance coverage are critical to addressing barriers to dental care for Mexican Americans.

Keywords: Mexican Americans, Spanish-speaking, foreign-born status, irregular dentist visits

1. Background

Mexican Americans, who make up approximately 60% of the U.S. Hispanic population, represent a significant and rapidly growing population (Moslimani, Lopez, & Noe-Bustamante, 2023). As of 2022, approximately 37.4 million people of Mexican descent resided in the United States, accounting for roughly 11% of the total U.S. population (Krogstad et al., 2023). Since 2000, the Mexican American population has increased by nearly 79% (Moslimani et al., 2023). Understanding dental care utilization and barriers to access within this population is essential for addressing their oral health disparities. Notably, Mexican Americans experience higher poverty rates (18%) compared to non-Hispanic Whites (10%) and lower rates of college attainment (15%) compared to non-Hispanic Whites (41%) (Moslimani et al., 2023; U.S. Census Bureau, 2021). These socioeconomic disparities underscore the need for targeted public health strategies aimed at improving dental care access. Mexican Americans face unique challenges in accessing dental care, influenced by factors such as socioeconomic status, nativity status, and English proficiency.

1.1 Socioeconomic Status

Socioeconomic status is a prominent factor distinguishing Mexican Americans from non-Hispanic Whites. Although Mexican Americans have made notable gains in education and income in the past decades, significant disparities persist. In 2000, only 6% of Mexican Americans aged 25 and older had a college degree or higher; by 2020, this proportion had increased to 15%, yet it remains considerably lower than the 41% of non-Hispanic Whites (U.S. Census Bureau, 2021). Additionally, approximately 18% of Mexican Americans live below the poverty line, a rate nearly double that of non-Hispanic Whites (10%) (Moslimani et al., 2023).

These socioeconomic disparities are particularly relevant when considering access to dental care. Education and

income have long been identified as key determinants of both dental care access and utilization (Hudson et al., 2007; Macek et al., 2002). Studies have shown that lower socioeconomic status is associated with less frequent dental visits and poorer oral health outcomes among Mexican Americans compared to non-Hispanic Whites (Doty & Weech-Maldonado, 2003; Sabbah et al., 2009). However, when controlling for education and income, the differences in dental care access and utilization between Mexican Americans and non-Hispanic Whites become less pronounced (Doty & Weech-Maldonado, 2003). This relationship highlights the critical role of socioeconomic resources in reducing disparities in oral health outcomes.

1.2 Nativity Status

The proportion of foreign-born Mexican Americans has decreased from 42% in 2000 to 29% in 2021 (Moslimani et al., 2023). Among the foreign-born population, 62% have resided in the United States for over 20 years, and 35% are U.S. citizens (Moslimani et al., 2023). Nativity-related factors, such as the length of stay in the United States and age at immigration, are critical determinants of timely and appropriate healthcare access (Derosé et al., 2007). Although prior studies have generally focused on Hispanics as a broad group, findings suggest that foreign-born Hispanic adults utilize dental services less frequently than their U.S.-born counterparts (Cheng & Guo, 2019; Wilson et al., 2016). However, more recent research indicates that foreign-born Mexican Americans are less likely to have irregular dental visits compared to their U.S.-born counterparts, suggesting an evolving protective effect of foreign-born status.

1.3 English proficiency

English proficiency also plays a significant role in healthcare access. In 2021, 31% of Mexican American adults reported limited proficiency in English, a figure that is even higher among recent immigrants, with 73% indicating language barriers (Haner & Lopez, 2023; Moslimani et al., 2023). Research consistently shows that limited English proficiency is associated with reduced access to dental care. For instance, Spanish-speaking individuals are significantly more likely to have irregular dental visits compared to English-speaking individuals (Cheng & Guo, 2019; Han, 2019). A small-group study focusing on Mexican immigrant women and their families in North San Diego County identified language barriers as a major obstacle to dental care access (Velez et al., 2017).

1.4 Study Aim

While existing research has explored various disparities in dental care access among Hispanic populations, significant gaps remain. First, much of the previous research has focused on the broader Hispanic population, with less attention paid to the Mexican American subgroup. Second, no study to date has examined changes in demographic characteristics and their impact on dental care access for Mexican Americans. This study aims to fill this gap using data from multiple waves of the National Health and Nutrition Examination Survey. Our objective is to examine the trends and factors influencing dental care utilization among Mexican Americans across two distinct time periods. This approach provides a unique opportunity to observe evolving patterns of dental care utilization within this population. By analyzing data over an extended timeframe, we can assess the effects of demographic shifts, socioeconomic changes, and policy developments on dental care access. Such comprehensive analysis is crucial for informing and developing more effective public health policies and interventions tailored to the needs of Mexican Americans. Specifically, we addressed the following research questions:

- 1). How have the demographic characteristics of Mexican Americans changed from 1988 to 2020?
- 2). What socioeconomic factors have contributed to changes in irregular dental visits among Mexican Americans from 1988 to 2020?
- 3). How does immigration status influence the likelihood of irregular dental visits among Mexican Americans, and has this relationship changed over time?

2. Method

2.1 Data and Sample

Data were drawn from the National Health and Nutrition Examination Surveys (NHANES), specifically the third wave (III; 1988-1994) and the 2011-2020 waves. NHANES aims to assess the health and nutritional status of adults and children across the United States. Each wave includes demographic data and questionnaire responses. This study included only Mexican Americans aged 20 and older from each wave. Participants with missing data for any dependent or independent variables were excluded. The final sample consisted of 3,347 participants in NHANES III and 2,767 participants in NHANES 2011-2020.

2.2 Measurements

2.2.1 Dependent Variable

The dependent variable was irregular dentist visits, defined by the timing of the most recent dental visit. Participants were asked, “When did you last visit a dentist?” Responses were recoded into a binary variable: those who had visited a dentist within the past year (0), and those who had not visited a dentist in over a year (1).

2.2.2 Independent Variables

NHANES used English and Spanish as the interview language. In this study, language spoken during the interview was coded as English-speaking (0) and Spanish-speaking (1). Participants were asked “In what country were you born?” In this paper, we coded the country of birth as born in the United States (0) and foreign-born (1).

Education and family income were used to capture socioeconomic status. There are five categories of education in the survey: “less than 9th grade, 9-11th grade (Includes 12th grade with no diploma), high school graduate/GED or equivalent, some college or AA degree, college graduate or above.” We recoded education into three ordinal categories: no high school (1), high school (2), and some college or above (3). Family income was measured in multiple questions in NHANES surveys. We measured family income according to the “Ratio of family income to poverty” and we collapsed the values into three groups: at or below the poverty line (1), twice the poverty line (2), and three times the poverty line or higher (3). Health insurance was coded as not having health insurance (0) and having health insurance (1), according to the survey question “Covered by health insurance”.

Demographic characteristics included gender and age. Gender was coded as male (0) and female (1) in this paper. Age was measured as chronological age in the survey and we recoded it into three age groups: 20-39 years (1), 40-59 years (2), and 60 years and older (3).

2.3 Statistical Analysis

Data analyses were conducted in four stages using STATA software (version 14.2). First, the proportions of relevant variables were reported for Mexican Americans in NHANES III and NHANES 2011-2020. Second, Spearman’s rank correlation coefficients were computed for each wave to assess pairwise relationships between variables. Third, logistic regression models were applied to analyze dental visits in both NHANES III and NHANES 2011-2020. Because the aim of this study was to compare patterns across two NHANES periods, sample weights were not applied. Finally, the slope difference between the two groups was tested using the following formula:

$$t = (b_1 - b_2) / \sqrt{(SE_1^2 + SE_2^2)}$$

where b_1 and b_2 represent the coefficients for the two NHANES periods and SE_1 and SE_2 represent the standard errors for those coefficients (Marascuilo & Levin 1983). Significant differences are reported in Table 2 using boxes.

4. Results

4.1 Demographic Change

Table 1 presents the unweighted descriptive results of the analytical sample from the two NHANES periods used in this study: NHANES III (1988-1994) and NHANES 2011-2020. The proportion of participants reporting irregular dental visits decreased from 0.67 in NHANES III to 0.54 in NHANES 2011-2020. The proportion of Spanish-speaking is 0.42 in NHANES III and 0.46 in NHANES 2011-2020. The proportion of foreign-born participants increased from 0.46 in NHANES III to 0.57 in NHANES 2011-2020. Regarding education, the proportion of participants with a college education or higher increased from 0.19 in NHANES III to 0.33 in NHANES 2011-2020. The proportion of participants with health insurance decreased from 0.69 in NHANES III to 0.65 in NHANES 2011-2020. The age distribution also shifted. The proportion of participants in the 40-59 age group increased from 0.26 to 0.35, and in the 60+ age group, it rose from 0.19 to 0.26 between the two periods.

Table 2 displays the Spearman rank correlation coefficients between irregular dental visits and key demographic factors in NHANES III and NHANES 2011-2020. Socioeconomic status, represented by education and family income, showed a strong inverse relationship with irregular dental visits. Specifically, education was negatively correlated with irregular dental visits in both periods (NHANES III: $r = -0.29$, $p < .001$; NHANES 2011-2020: $r = -0.13$, $p < .001$), suggesting that higher education levels are associated with more regular dental care. Family income also demonstrated a significant negative correlation (NHANES III: $r = -0.34$, $p < .001$; NHANES 2011-2020: $r = -0.20$, $p < .001$), indicating that individuals with higher incomes are more likely to maintain consistent dental visits. Moreover, education and family income were strongly positively correlated (NHANES III:

$r = 0.40$, $p < .001$; NHANES 2011-2020: $r = 0.37$, $p < .001$), reinforcing the link between these two indicators of socioeconomic status.

Table 1. Unweighted descriptive results of the analytical sample

| | NHANES III (1988-1994) | NHANES (2011-2020) |
|--|------------------------|--------------------|
| Observations | 3347 | 2767 |
| Irregular dental visits | 0.67 ^a | 0.55 |
| Spanish-speaking | 0.42 | 0.46 |
| Foreign-born status | 0.46 | 0.56 |
| Education (ref=no high school) | | |
| High school | 0.42 | 0.40 |
| College and above | 0.19 | 0.33 |
| Family income (ref=poverty line and lower) | | |
| Twice of poverty line | 0.33 | 0.32 |
| Three times of poverty line | 0.35 | 0.37 |
| Health insurance | 0.69 | 0.63 |
| Female | 0.51 | 0.50 |
| age (ref=20-39) | | |
| 40-59 | 0.26 | 0.35 |
| 60+ | 0.19 | 0.25 |

a., proportion.

Beyond socioeconomic status, nativity status and English proficiency also showed notable correlations with irregular dental visits. Spanish-speaking individuals were more likely to have irregular dental visits, with correlation coefficients of $r = 0.28$ ($p < .001$) in NHANES III and $r = 0.13$ ($p < .001$) in NHANES 2011-2020. Foreign-born status was positively correlated with irregular dental visits (NHANES III: $r = 0.20$, $p < .001$; NHANES 2011-2020: $r = 0.06$, $p < .01$), indicating a higher likelihood of irregular visits among foreign-born individuals.

Health insurance coverage was negatively correlated with irregular dental visits in both periods (NHANES III and NHANES 2011-2020: $r = -0.24$, $p < .001$), suggesting that individuals with insurance are more likely to seek regular dental care. In both periods, being female was negatively associated with irregular dentist visits (NHANES III: $r = -0.09$, $p < .001$; NHANES 2011-2020: $r = -0.10$, $p < .001$). Age was negatively correlated with irregular dental visits in NHANES 2011-2020 ($r = -0.11$, $p < .001$), but no significant correlation was found in NHANES III ($r = 0.03$, $p > .05$).

4.2 Language and Foreign-Born Status

Table 3 presents the logistic regression analysis of irregular dental visits among Mexican Americans, using data from NHANES III and NHANES 2011-2020. The variables examined included English proficiency (Spanish-speaking), immigration status (foreign-born), education levels, family income relative to the poverty line, health insurance status, age, and gender. Slope tests were used to compare the odds ratios of the independent variables covariates across the two periods.

The likelihood of irregular dental visits was significantly higher among Spanish-speaking individuals in both periods. In NHANES III, foreign-born status did not significantly affect the likelihood of irregular dental visits. However, in NHANES 2011-2020, foreign-born status was significantly associated with a lower likelihood of irregular visits (OR = 0.578, 95% CI = 0.458, 0.730). Slope tests indicated that the odds ratio of irregular dental visits among foreign-born individuals significantly changed from OR = 0.979 (95% CI = 0.796, 1.205) in NHANES III to OR = 0.578 (95% CI = 0.458, 0.730) in NHANES 2011-2020.

Table 2. Spearman rank correlation coefficients

| <i>NHANES III(n=3345)</i> | | | | | | | | |
|---------------------------------|-----------------------------|--------------------------|----------------------|------------------|----------------------|------------------|---------------|------------|
| | <i>Irregular dent visit</i> | <i>Spanish -speaking</i> | <i>Foreign -born</i> | <i>Education</i> | <i>Family income</i> | <i>Insurance</i> | <i>Female</i> | <i>Age</i> |
| <i>Irregular dentist visit</i> | 1.00 | | | | | | | |
| <i>Spanish-speaking</i> | 0.28*** | 1.00 | | | | | | |
| <i>Foreign-born</i> | 0.20*** | 0.59*** | 1.00 | | | | | |
| <i>Education</i> | -0.29*** | -0.44*** | -0.34*** | 1.00 | | | | |
| <i>Family income</i> | -0.34*** | -0.38*** | -0.25*** | 0.40*** | 1.00 | | | |
| <i>Health insurance</i> | -0.24*** | -0.30*** | -0.30*** | 0.16*** | 0.34*** | 1.00 | | |
| <i>Female</i> | -0.09*** | -0.03 | -0.03* | 0.01 | -0.09*** | -0.01 | 1.00 | |
| <i>Age</i> | 0.03 | 0.02 | -0.13*** | -0.30*** | -0.01 | 0.22*** | -0.06*** | 1.00 |
| <i>NHANES 2011-2020(n=2767)</i> | | | | | | | | |
| | <i>Irregular dent visit</i> | <i>Spanish -speaking</i> | <i>Foreign -born</i> | <i>Education</i> | <i>Family income</i> | <i>Insurance</i> | <i>Female</i> | <i>Age</i> |
| <i>Irregular dentist visit</i> | 1.00 | | | | | | | |
| <i>Spanish-speaking</i> | 0.13*** | 1.00 | | | | | | |
| <i>Foreign-born</i> | 0.06*** | 0.71*** | 1.00 | | | | | |
| <i>Education</i> | -0.13*** | -0.53*** | -0.43*** | 1.00 | | | | |
| <i>Family income</i> | -0.20*** | -0.36*** | -0.28*** | 0.37*** | 1.00 | | | |
| <i>Health insurance</i> | -0.24*** | -0.34*** | -0.33*** | 0.20*** | 0.32*** | 1.00 | | |
| <i>Female</i> | -0.10*** | -0.04* | -0.03 | 0.08*** | -0.04* | 0.03 | 1.00 | |
| <i>Age</i> | -0.11*** | 0.09*** | 0.05** | -0.21*** | 0.04* | 0.25*** | -0.01 | 1.00 |

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 3. Irregular dental visits of Mexican Americans from 1988 to 2020

| VARIABLES | NHANES III (1988-1994) | NHANES (2011-2020) |
|---|--|-----------------------------|
| Spanish-speaking | 1.740*** ^a (1.394 - 2.172) | 1.369* (1.069 - 1.753) |
| Foreign-born status | 0.979 (0.796 - 1.205) | 0.578*** (0.458 - 0.730) |
| Education (ref=no high school) | | |
| High school | 0.644*** (0.518 - 0.800) | 0.760* (0.608 - 0.949) |
| College and above | 0.414*** (0.318 - 0.539) | 0.635*** (0.491 - 0.822) |
| Family income (ref=poverty line or lower) | | |
| Twice of poverty line | 0.522*** (0.417 - 0.652) | 0.873 (0.713 - 1.069) |
| Three times of poverty line | 0.297*** (0.235 - 0.374) | 0.541*** (0.436 - 0.671) |
| Health insurance | 0.466*** (0.377 - 0.576) | 0.447*** (0.369 - 0.540) |
| Age (ref=20-39) | | |
| 40-59 | 0.829 (0.684 - 1.006) | 0.817* (0.675 - 0.989) |
| 60+ | 1.184 (0.929 - 1.510) | 0.619*** (0.498 - 0.769) |
| Female | 0.593*** (0.503 - 0.698) | 0.658*** (0.561 - 0.772) |
| Constant | 11.941*** (8.545 - 16.685) | 6.232*** (4.462 - 8.706) |
| Observations | 3,347 | 2,767 |
| Log-likelihood | -1792 | -1760 |
| Chi-square | 652.6 | 287.8 |

a., odds ratio and 95%CI in parentheses

Boxed means significant slope difference

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.3 Socioeconomic Status

In terms of socioeconomic status, education levels and household income remained significant factors influencing Mexican Americans' dental visits. Our analysis revealed that higher levels of education were consistently associated with a lower likelihood of irregular dental visits in both NHANES periods. Similarly, higher family income levels were associated with a decreased likelihood of irregular dental visits in both periods. However, in NHANES 2011-2020, only participants with family incomes three times the poverty line were significantly less likely to have irregular dental visits compared to those with family incomes at and below the poverty line (OR = 0.541, 95% CI = 0.436, 0.671)

Slope tests showed that the odds ratio for irregular dental visits among participants with college degrees or higher significantly changed from OR = 0.414 (95% CI = 0.318, 0.539) in NHANES III to OR = 0.635 (95% CI = 0.491,

0.822) in NHANES 2011-2020. Additionally, compared to NHANES III, participants with family incomes at twice or three times the poverty line in NHANES 2011-2020 had significantly higher odds ratios of irregular dental visits.

4.4 Health Insurance, Age, and Gender

Having health insurance was a significant predictor of lower odds of irregular dental visits in both periods. The impact of age on irregular dental visits varied across the two periods. Individuals aged 60 and older were more likely to have irregular visits in NHANES III, but this was not observed in NHANES 2011-2020. In contrast, the 40-59 age group showed a significant association with irregular visits only in the later period. Female participants were less likely to have irregular dental visits in both periods, with a consistent pattern observed in the odds ratios. Slope tests showed that the odds ratio of irregular dental visits among those 60 and older significantly decreased from OR = 1.184 (95% CI = 0.510, 0.929) in NHANES III to OR = 0.619 (95% CI = 0.498, 0.769) in NHANES 2011-2020.

5. Discussion

This study examined changes in the Mexican American population over time and the effects of immigrant status and socioeconomic factors on dentist care utilization from 1988 to 2020. Compared to Mexican Americans in NHANES III, those in NHANES 2011-2020 reported a lower proportion of irregular dental visits, a higher proportion of Spanish speakers, and a higher proportion of foreign-born individuals (Moslimani et al., 2023). Over the course of several decades, there has been an increase in the proportion of Mexican Americans with a college education (Moslimani et al., 2023), as well as a slight increase in those with higher family incomes. However, the proportion with health insurance has decreased since NHANES III (U.S. Census Bureau, 2021). The relationship between education and family income also changed between 1988 and 2020. While the proportion of Mexican Americans with a college education increased, the rise in educational attainment did not translate into higher family income (Moslimani et al., 2023; Zhou & Lee, 2004). This finding aligns with research on immigrants from other racial and ethnic groups. These findings answered the first research question.

Our analysis showed that both college education and higher family income were associated with a lower likelihood of irregular dentist visits, but the protective effects of these factors significantly decreased from 1988 to 2020. This decline may be due, in part, to the low proportion of Mexican Americans with health insurance. Health insurance coverage continued to be a significant predictor of regular dentist visits, and this effect persisted over time (Doty & Weech-Maldonado, 2003). Rising healthcare costs over the past few decades, combined with the persistent low income among Mexican Americans, may also contribute to this trend. In our sample, more than 60% of Mexican Americans had family incomes at or below 200% of the poverty line, a proportion that remained stable from 1988 to 2020 (Moslimani et al., 2023; Noe-Bustamante, 2020). The second research question was responded.

In both NHANES III and NHANES 2011-2020, Spanish-speaking status was associated with a higher likelihood of irregular dentist visits. Notably, more than 50% of participants preferred Spanish (Cheng & Guo, 2019; Velez et al., 2017). Foreign-born status, however, was significantly associated with a lower likelihood of irregular dental visits in NHANES 2011-2020 (Derose et al., 2007; Wilson et al., 2016). The third research question was answered. These disparities in dental care access may be partially explained by the stark socioeconomic differences between Mexican Americans and non-Hispanic Whites. Despite educational gains, Mexican Americans' economic progress has lagged behind that of non-Hispanic Whites (Moslimani et al., 2023; U.S. Census Bureau, 2021).

This study has three main limitations. First, previous studies have highlighted the association between citizenship and dental care (Derose et al., 2007). However, because citizenship data were missing in several NHANES waves, we did not include citizenship as an independent variable. Second, this study focused on the period effects of dentist visits among Mexican Americans, but it is difficult to separate cohort effects, as NHANES uses different participants for each wave. Therefore, distinguishing between the effects of cohort changes and shifts in dentist visit patterns is challenging. Third, while this study examined changes in the associations between immigrant status, socioeconomic status, and demographic characteristics and dentist visits, the causal relationships remain unclear.

Despite these limitations, this study makes several contributions to the literature. First, the study enhances understanding of how social determinants of health, such as education and nativity, are associated with dental care access over time. The findings challenge the assumption that educational attainment universally improves health access, revealing a temporal decline in its protective role among Mexican Americans. Additionally, the findings suggest that traditional approaches to reducing disparities, such as improving education levels, may need to be reevaluated for specific subpopulations and contexts. Second, by revealing the increasing protective effects of

being foreign-born, the study underscores the need for more nuanced research into immigrant health and healthcare access, highlighting resilience factors unique to foreign-born populations, such as stronger social networks or reliance on alternative care practices. Third, comparing two distinct time periods emphasizes the importance of tracking how population changes and societal shifts impact health outcomes over time, offering a valuable lens for understanding the dynamics of health equity. Policymakers should consider targeted strategies that address evolving demographic realities, including cultural and linguistic support for Spanish-speaking populations.

6. Conclusion

This study investigated trends and factors influencing dental care utilization among Mexican Americans from 1988 to 2020 using NHANES data. Our analysis revealed significant demographic changes and shifts in the influence of socioeconomic and immigrant status on dental visits over time. The results indicate a decrease in irregular dental visits among Mexican Americans, along with an increase in the proportion of foreign-born individuals and those with higher education. Notably, Spanish-speaking participants were more likely to have irregular dental visits in both NHANES periods, while higher education, family income, and health insurance consistently reduced this likelihood. However, the protective effects of education and income appear to have diminished over the decades, potentially due to rising dental care costs and changes in the socioeconomic landscape. The increased protective effect of being foreign-born may reflect shifts in societal factors, such as racism, over the past decades. This study highlights the need for further research into the underlying mechanisms behind the increased protective effect of being foreign-born, including cultural behaviors, community resources, or systemic factors, as well as the role of linguistic factors, such as being Spanish-speaking, in mediating access to care and whether these effects persist across generations.

Acknowledgement

We sincerely thank Amber S. McIlwain, our professional editor at the Sealy Center on Aging, for her invaluable assistance in reviewing and refining this manuscript.

Funding

No funding.

Conflicts of Interest

This paper included no conflicts of interest.

References

- Cheng, T. C., & Guo, Y. (2019). Adult immigrants' utilization of physician visits, dentist visits, and prescription medication. *Journal of Racial and Ethnic Health Disparities*, 6, 497-504. <https://doi.org/10.1007/s40615-018-00548-7>
- Derose, K. P., Escarce, J. J., & Lurie, N. (2007). Immigrants and health care: sources of vulnerability. *Health affairs*, 26(5), 1258-1268. <https://doi.org/10.1377/hlthaff.26.5.1258>
- Doty, H. E., & Weech-Maldonado, R. (2003). Racial/ethnic disparities in adult preventive dental care use. *Journal of health care for the poor and underserved*, 14(4), 516-534. <https://doi.org/10.1353/hpu.2010.0724>.
- DuBard, C. A., & Gizlice, Z. (2008). Language spoken and differences in health status, access to care, and receipt of preventive services among US Hispanics. *American journal of public health*, 98(11), 2021-2028. <https://doi.org/10.2105/AJPH.2007.119008>
- Han, C. (2019). Oral health disparities: racial, language and nativity effects. *SSM-population health*, 8, 100436. <https://doi.org/10.1016/j.ssmph.2019.100436>
- Haner, J., & Lopez, M. H. (2023). *8 facts about recent Latino immigrants to the U.S.* Retrieved from <https://www.pewresearch.org/short-reads/2023/09/28/8-facts-about-recent-latino-immigrants-to-the-us/>
- Hudson, K., Stockard, J., & Ramberg, Z. (2007). The impact of socioeconomic status and race-ethnicity on dental health. *Sociological Perspectives*, 50(1), 7-25. <https://doi.org/10.1525/sop.2007.50.1.7>
- Krogstad, J. M., Passel, J. S., Moslimani, M., & Noe-Bustamante, L. (2023). Retrieved from <https://www.pewresearch.org/short-reads/2023/09/22/key-facts-about-us-latinos-for-national-hispanic-heritage-month/>
- Macek, M. D., Manski, R. J., Vargas, C. M., & Moeller, J. (2002). Comparing oral health care utilization

- estimates in the United States across three nationally representative surveys. *Health services research*, 37(2), 499-521. <https://doi.org/10.1111/1475-6773.034>
- Marascuilo, L. A., & Levin, J. R. (1983). *Multivariate statistics in the social sciences: A researcher's guide*. NY: Brooks/Cole Pub. Co.
- Moslimani, M., Noe-Bustamante, L., & Shah, S. (2023). *Acts on Hispanics of Mexican origin in the United States, 2021*. Retrieved from <https://www.pewresearch.org/hispanic/fact-sheet/us-hispanics-facts-on-mexican-origin-latinos/>
- Noe-Bustamante, L. (2020). *Education levels of recent Latino immigrants in the U.S. reached new highs as of 2018*. Retrieved from <https://www.pewresearch.org/short-reads/2020/04/07/education-levels-of-recent-latino-immigrants-in-the-u-s-reached-new-highs-as-of-2018/>
- Ohlson, M. (2020). Effects of socioeconomic status and race on access to healthcare in the United States. *Perspectives*, 12(1), 2. Retrieved from <https://scholars.unh.edu/perspectives/vol12/iss1/2>
- Sabbah, W., Tsakos, G., Sheiham, A., & Watt, R. G. (2009). The effects of income and education on ethnic differences in oral health: a study in US adults. *Journal of Epidemiology & Community Health*, 63(7), 516-520. <https://doi.org/10.1136/jech.2008.082313>
- Stewart, D. C., Ortega, A. N., Dausey, D., & Rosenheck, R. (2002). Oral health and use of dental services among Hispanics. *Journal of public health dentistry*, 62(2), 84-91. <https://doi.org/10.1111/j.1752-7325.2002.tb03427.x>
- U.S. Census Bureau (2021). *Educational Attainment in the United States: 2020*. Retrieved from <https://www.census.gov/data/tables/2020/demo/educational-attainment/cps-detailed-tables.html>
- Velez, D., Palomo-Zerfas, A., Nunez-Alvarez, A., Ayala, G. X., & Finlayson, T. L. (2017). Facilitators and barriers to dental care among Mexican migrant women and their families in North San Diego County. *Journal of immigrant and minority health*, 19, 1216-1226. <https://doi.org/10.1007/s10903-016-0467-2>
- Wehby, G. L., Lyu, W., & Shane, D. (2022). Racial and Ethnic Disparities in Dental Services Use Declined After Medicaid Adult Dental Coverage Expansions: Study examines impact of Medicaid expansion on dental care disparities. *Health Affairs*, 41(1), 44-52. <https://doi.org/10.1377/hlthaff.2021.01191>
- Wilson, F. A., Wang, Y., Stimpson, J. P., McFarland, K. K., & Singh, K. P. (2016). Use of dental services by immigration status in the United States. *The Journal of the American Dental Association*, 147(3), 162-169. <https://doi.org/10.1016/j.adaj.2015.08.009>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).